

05-16-2000

FORM PTO-1619A

Expires 06/30/99  
OMB 0651-0027



101358733

U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**

**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

TO: The Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies).

**Submission Type**

New

Resubmission (Non-Recordation)  
Document ID# \_\_\_\_\_

Correction of PTO Error  
Reel # \_\_\_\_\_ Frame # \_\_\_\_\_

Corrective Document  
Reel # \_\_\_\_\_ Frame # \_\_\_\_\_

**Conveyance Type**

Assignment  Security Agreement

License  Change of Name

Merger  Other \_\_\_\_\_

**U.S. Government**  
(For Use ONLY by U.S. Government Agencies)

Departmental File  Secret File

**Conveying Party(ies)**

Mark if additional names of conveying parties attached Execution Date  
Month Day Year

Name (line 1) Pua, Hok Yong Execution Date 03111999

Name (line 2) \_\_\_\_\_

**Second Party**

Execution Date  
Month Day Year

Name (line 1) Allen, Christopher Thomas Execution Date 03051999

Name (line 2) \_\_\_\_\_

**Receiving Party**

Mark if additional names of receiving parties attached

Name (line 1) University of Kansas

Name (line 2) \_\_\_\_\_

Address (line 1) Office of General Counsel

Address (line 2) Strong Hall

Address (line 3) Lawrence KS 66045  
City State/Country Zip Code

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name Eugene G. Kim

Address (line 1) Duft, Graziano & Forest, P.C.

Address (line 2) 1790 - 30th Street

Address (line 3) Suite 140

Address (line 4) Boulder, CO 80301-1018

**FOR OFFICE USE ONLY**

05/15/2000 DNGUYEN 00000387 210765 09500092

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Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

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

**PATENT**  
**REEL: 010779 FRAME: 0879**

Correspondent Name and Address

Area Code and Telephone Number (913) 624-6668

Name Harley R. Ball

Address (line 1) Sprint Communications Company, L. P.

Address (line 2) 8140 Ward Parkway, 5th Floor

Address (line 3) Masilstop: MOKCMP0504

Address (line 4) Kansas City, MO 64114

Pages Enter the total number of pages of the attached conveyance document including any attachments. # 5

Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

09/500,092

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Month Day Year

Patent Cooperation Treaty (PCT)

Enter PCT application number

PCT

PCT

PCT

only if a U.S. Application Number

PCT

PCT

PCT

has not been assigned.

Number of Properties

Enter the total number of properties involved. # 1

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment:

Deposit Account

Enclosed

Deposit Account

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number:

# 21-0765

Authorization to charge additional fees:

Yes

No

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. Charges to deposit account are authorized, as indicated herein.

Eugene G. Kim

Name of Person Signing

*Eugene Kim*  
Signature

4/27/00

Date

RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

Conveying Party(ies)

Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Demarest, Ken

Execution Date  
Month Day Year

03091999

Name (line 2)

Execution Date  
Month Day Year

Name (line 1) Hui, Rongqing

03081999

Name (line 2)

Execution Date  
Month Day Year

Name (line 1) Peddanarappagari, Kumar Vijay

03111999

Name (line 2)

Receiving Party(ies)

Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3) City State/Country Zip Code

Name (line 1)

If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3) City State/Country Zip Code

Application Number(s) or Patent Number(s)

Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)



ASSIGNMENT

COPY

(Assignment ID No. ITAA990301)

WHEREAS, I, Hok Yong Pua of 1800 East Spring Creek Parkway, No. 1423, Plano, Texas 75074, have invented certain new and useful technologies in the area of lightwave communications and networking, specifically as detailed in Technical Disclosure "First-Order Polarization-Mode Dispersion (PMD) Adaptive Compensation System" dated September 24, 1998, and any and all related technology derivatives (the "Intellectual Property") for which the University of Kansas may file an application for Letters Patent, and a registration of any Trademark, Servicemark, and Copyright under the laws of the United States; and

WHEREAS, the University of Kansas, a public educational institution duly organized under the laws of the State of Kansas and having its principal place of business at the Office of General Counsel, the University of Kansas, Strong Hall, Lawrence, Kansas 66045, is desirous of acquiring an interest in, to and under said Intellectual Property, any and all applications, and any and all Letters Patent, Trademarks, Servicemarks, and Copyrights which may be granted or registered for or upon said Intellectual Property in the United States of America and all countries foreign thereto.

NOW, THEREFORE, to all whom it may concern be it known that for good and valuable consideration, the receipt and sufficiently of which is hereby acknowledged, I, Hok Yong Pua, as one of several inventors, have assigned and transferred, and by these presents do assign and transfer unto the University of Kansas the full and exclusive right, title and interest, throughout the world, into and under the following:

- (a) said Intellectual Property as may be set forth and described in technical disclosure;
- (b) any and all applications;
- (c) any and all refilings, divisions, and continuations of all applications;
- (d) any and all Trademarks, Servicemarks, and Copyrights which may issue or be registered, or rights which may be assumed, from the Intellectual Property;
- (e) any and all Letters Patent of the United States of America which may issue from all applications, refilings, divisions and continuations;
- (f) any and all reissues of said Letters Patent of the United States of America;
- (g) any and all applications for Letters Patent upon said Intellectual Property which have heretofore been filed or may hereafter be filed in any and all countries foreign to the United States of America, together with all rights to file and to claim priority in connection with all foreign-filed applications;
- (h) any and all refilings, divisions and continuations of all foreign-filed applications,
- (i) any and all Letters Patent of countries foreign to the United States of America which may issue from the all foreign-filed applications, refilings, divisions and continuations; and
- (j) any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America.

ALL of the above shall be held and enjoyed by THE UNIVERSITY OF KANSAS for its own use and behalf, and for its successors, legal representatives and assigns, to the full end of the term for which Letters Patent, Trademarks, Servicemarks, and Copyrights may be granted, and we do hereby authorize and request the United States Patent and Trademark Office to issue Letters Patent, and to register Trademarks and Servicemarks, and request the United States Copyright Office to register Copyrights, in accordance with this Agreement.

Date: 5/11/1999 Signed: \_\_\_\_\_

STATE OF TEXAS )  
COUNTY OF Collin )ss.

On this 11 day of March, 1999, before me personally appeared to me, Hok Yong Pua, known to be the person described in and who executed the foregoing instrument, and who duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

Cindy McNeil  
Notary Public

My Commission expires:  
10/10/2000  
SEAL



STATE OF TEXAS )  
COUNTY OF \_\_\_\_\_ )ss.

ASSIGNMENT

(Assignment ID No. ITAA990302)

COPY

WHEREAS, I, Chris Allen of 16913 East 51st Court, Independence, Missouri 64055-6368, have invented certain new and useful technologies in the area of lightwave communications and networking, specifically as detailed in Technical Disclosure "First-Order Polarization-Mode Dispersion (PMD) Adaptive Compensation System" dated September 24, 1998, and any and all related technology derivatives (the "Intellectual Property") for which the University of Kansas may file an application for Letters Patent, and a registration of any Trademark, Servicemark, and Copyright under the laws of the United States; and

WHEREAS, the University of Kansas, a public educational institution duly organized under the laws of the State of Kansas and having its principal place of business at the Office of General Counsel, the University of Kansas, Strong Hall, Lawrence, Kansas 66045, is desirous of acquiring an interest in, to and under said Intellectual Property, any and all applications, and any and all Letters Patent, Trademarks, Servicemarks, and Copyrights which may be granted or registered for or upon said Intellectual Property in the United States of America and all countries foreign thereto.

NOW, THEREFORE, to all whom it may concern be it known that for good and valuable consideration, the receipt and sufficiently of which is hereby acknowledged, I, Chris Allen, as one of several inventors, have assigned and transferred, and by these presents do assign and transfer unto the University of Kansas the full and exclusive right, title and interest, throughout the world, into and under the following:

- (a) said Intellectual Property as may be set forth and described in technical disclosure;
(b) any and all applications;
(c) any and all refilings, divisions, and continuations of all applications;
(d) any and all Trademarks, Servicemarks, and Copyrights which may issue or be registered, or rights which may be assumed, from the Intellectual Property;
(e) any and all Letters Patent of the United States of America which may issue from all applications, refilings, divisions and continuations;
(f) any and all reissues of said Letters Patent of the United States of America;
(g) any and all applications for Letters Patent upon said Intellectual Property which have heretofore been filed or may hereafter be filed in any and all countries foreign to the United States of America, together with all rights to file and to claim priority in connection with all foreign-filed applications;
(h) any and all refilings, divisions and continuations of all foreign-filed applications,
(i) any and all Letters Patent of countries foreign to the United States of America which may issue from the all foreign-filed applications, refilings, divisions and continuations; and
(j) any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America.

ALL of the above shall be held and enjoyed by THE UNIVERSITY OF KANSAS for its own use and behalf, and for its successors, legal representatives and assigns, to the full end of the term for which Letters Patent, Trademarks, Servicemarks, and Copyrights may be granted, and we do hereby authorize and request the United States Patent and Trademark Office to issue Letters Patent, and to register Trademarks and Servicemarks, and request the United States Copyright Office to register Copyrights, in accordance with this Agreement.

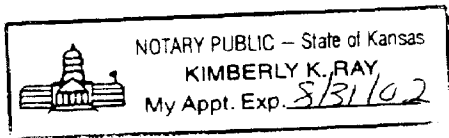
Date: March 5, 1999 Signed: [Signature]

STATE OF KANSAS )
COUNTY OF DOUGLAS) ss.

On this 5th day of March, 1999, before me personally appeared to me, [Name], known to be the person described in and who executed the foregoing instrument, and who duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

[Signature]
Notary Public

My Commission expires:
Aug 31, 2002
SEAL



STATE OF KANSAS )
COUNTY OF DOUGLAS) ss.

# ASSIGNMENT

# COPY

(Assignment ID No. ITAA990303)

WHEREAS, I, Ken Demarest of 745 East 1485 Road, Lawrence, KS 66046, have invented certain new and useful technologies in the area of lightwave communications and networking, specifically as detailed in Technical Disclosure "First-Order Polarization-Mode Dispersion (PMD) Adaptive Compensation System" dated September 24, 1998, and any and all related technology derivatives (the "Intellectual Property") for which the University of Kansas may file an application for Letters Patent, and a registration of any Trademark, Servicemark, and Copyright under the laws of the United States: and

WHEREAS, the University of Kansas, a public educational institution duly organized under the laws of the State of Kansas and having its principal place of business at the Office of General Counsel, the University of Kansas, Strong Hall, Lawrence, Kansas 66045, is desirous of acquiring an interest in, to and under said Intellectual Property, any and all applications, and any and all Letters Patent, Trademarks, Servicemarks, and Copyrights which may be granted or registered for or upon said Intellectual Property in the United States of America and all countries foreign thereto.

NOW, THEREFORE, to all whom it may concern be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, Ken Demarest, as one of several inventors, have assigned and transferred, and by these presents do assign and transfer unto the University of Kansas the full and exclusive right, title and interest, throughout the world, into and under the following:

- (a) said Intellectual Property as may be set forth and described in technical disclosure;
- (b) any and all applications;
- (c) any and all refilings, divisions, and continuations of all applications;
- (d) any and all Trademarks, Servicemarks, and Copyrights which may issue or be registered, or rights which may be assumed, from the Intellectual Property;
- (e) any and all Letters Patent of the United States of America which may issue from all applications, refilings, divisions and continuations;
- (f) any and all reissues of said Letters Patent of the United States of America;
- (g) any and all applications for Letters Patent upon said Intellectual Property which have heretofore been filed or may hereafter be filed in any and all countries foreign to the United States of America, together with all rights to file and to claim priority in connection with all foreign-filed applications;
- (h) any and all refilings, divisions and continuations of all foreign-filed applications,
- (i) any and all Letters Patent of countries foreign to the United States of America which may issue from the all foreign-filed applications, refilings, divisions and continuations; and
- (j) any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America.

ALL of the above shall be held and enjoyed by THE UNIVERSITY OF KANSAS for its own use and behalf, and for its successors, legal representatives and assigns, to the full end of the term for which Letters Patent, Trademarks, Servicemarks, and Copyrights may be granted, and we do hereby authorize and request the United States Patent and Trademark Office to issue Letters Patent, and to register Trademarks and Servicemarks, and request the United States Copyright Office to register Copyrights, in accordance with this Agreement.

Date: 3/9/99 Signed: [Signature]

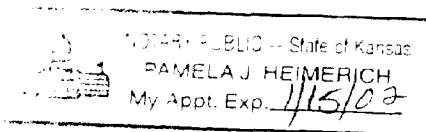
STATE OF KANSAS )  
 )ss.  
COUNTY OF DOUGLAS)

On this 9<sup>th</sup> day of March, 1999, before me personally appeared to me, \_\_\_\_\_, known to be the person described in and who executed the foregoing instrument, and who duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

Pamela J. Heimerich  
Notary Public

My Commission expires:

\_\_\_\_\_ SEAL



STATE OF KANSAS )  
 )ss.  
COUNTY OF DOUGLAS)

ASSIGNMENT

(Assignment ID No. ITAA990304)

COPY

WHEREAS, I, Rongqing Hui of 2310 Princeton Place, Lawrence, Kansas 66049, have invented certain new and useful technologies in the area of lightwave communications and networking, specifically as detailed in Technical Disclosure "First-Order Polarization-Mode Dispersion (PMD) Adaptive Compensation System" dated September 24, 1998, and any and all related technology derivatives (the "Intellectual Property") for which the University of Kansas may file an application for Letters Patent, and a registration of any Trademark, Servicemark, and Copyright under the laws of the United States; and

WHEREAS, the University of Kansas, a public educational institution duly organized under the laws of the State of Kansas and having its principal place of business at the Office of General Counsel, the University of Kansas, Strong Hall, Lawrence, Kansas 66045, is desirous of acquiring an interest in, to and under said Intellectual Property, any and all applications, and any and all Letters Patent, Trademarks, Servicemarks, and Copyrights which may be granted or registered for or upon said Intellectual Property in the United States of America and all countries foreign thereto.

NOW, THEREFORE, to ail whom it may concern be it known that for good and valuable consideration, the receipt and sufficiently of which is hereby acknowledged, I, Rongqing Hui, as one of several inventors, have assigned and transferred, and by these presents do assign and transfer unto the University of Kansas the full and exclusive right, title and interest, throughout the world, into and under the following:

- (a) said Intellectual Property as may be set forth and described in technical disclosure;
- (b) any and all applications;
- (c) any and all refilings, divisions, and continuations of all applications;
- (d) any and all Trademarks, Servicemarks, and Copyrights which may issue or be registered, or rights which may be assumed, from the Intellectual Property;
- (e) any and all Letters Patent of the United States of America which may issue from all applications, refilings, divisions and continuations;
- (f) any and all reissues of said Letters Patent of the United States of America;
- (g) any and all applications for Letters Patent upon said Intellectual Property which have heretofore been filed or may hereafter be filed in any and all countries foreign to the United States of America, together with all rights to file and to claim priority in connection with all foreign-filed applications;
- (h) any and all refilings, divisions and continuations of all foreign-filed applications,
- (i) any and all Letters Patent of countries foreign to the United States of America which may issue from the all foreign-filed applications, refilings, divisions and continuations; and
- (j) any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America.

ALL of the above shall be held and enjoyed by THE UNIVERSITY OF KANSAS for its own use and behalf, and for its successors, legal representatives and assigns, to the full end of the term for which Letters Patent, Trademarks, Servicemarks, and Copyrights may be granted, and we do hereby authorize and request the United States Patent and Trademark Office to issue Letters Patent, and to register Trademarks and Servicemarks, and request the United States Copyright Office to register Copyrights, in accordance with this Agreement.

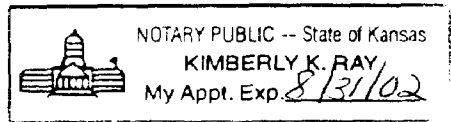
Date: 03/08/99 Signed: [Signature]

STATE OF KANSAS )  
 )ss.  
COUNTY OF DOUGLAS)

On this 8th day of March, 1999, before me personally appeared to me, \_\_\_\_\_, known to be the person described in and who executed the foregoing instrument, and who duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

[Signature]  
Notary Public

My Commission expires:  
Aug 31, 2002  
SEAL



STATE OF KANSAS )  
 )ss.  
COUNTY OF DOUGLAS)

# ASSIGNMENT

(Assignment ID No. ITAA990305)

# COPY

WHEREAS, I, Kumar Peddanarappagari of 2401 Ohio Drive, #204, Plano, Texas 75093, have invented certain new and useful technologies in the area of lightwave communications and networking, specifically as detailed in Technical Disclosure "First-Order Polarization-Mode Dispersion (PMD) Adaptive Compensation System" dated September 24, 1998, and any and all related technology derivatives (the "Intellectual Property") for which the University of Kansas may file an application for Letters Patent, and a registration of any Trademark, Servicemark, and Copyright under the laws of the United States; and

WHEREAS, the University of Kansas, a public educational institution duly organized under the laws of the State of Kansas and having its principal place of business at the Office of General Counsel, the University of Kansas, Strong Hall, Lawrence, Kansas 66045, is desirous of acquiring an interest in, to and under said Intellectual Property, any and all applications, and any and all Letters Patent, Trademarks, Servicemarks, and Copyrights which may be granted or registered for or upon said Intellectual Property in the United States of America and all countries foreign thereto.

NOW, THEREFORE, to all whom it may concern be it known that for good and valuable consideration, the receipt and sufficiently of which is hereby acknowledged, I, Kumar Peddanarappagari, as one of several inventors, have assigned and transferred, and by these presents do assign and transfer unto the University of Kansas the full and exclusive right, title and interest, throughout the world, into and under the following:

- (a) said Intellectual Property as may be set forth and described in technical disclosure;
- (b) any and all applications;
- (c) any and all refilings, divisions, and continuations of all applications;
- (d) any and all Trademarks, Servicemarks, and Copyrights which may issue or be registered, or rights which may be assumed, from the Intellectual Property;
- (e) any and all Letters Patent of the United States of America which may issue from all applications, refilings, divisions and continuations;
- (f) any and all reissues of said Letters Patent of the United States of America;
- (g) any and all applications for Letters Patent upon said Intellectual Property which have heretofore been filed or may hereafter be filed in any and all countries foreign to the United States of America, together with all rights to file and to claim priority in connection with all foreign-filed applications;
- (h) any and all refilings, divisions and continuations of all foreign-filed applications,
- (i) any and all Letters Patent of countries foreign to the United States of America which may issue from the all foreign-filed applications, refilings, divisions and continuations; and
- (j) any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America.

ALL of the above shall be held and enjoyed by THE UNIVERSITY OF KANSAS for its own use and behalf, and for its successors, legal representatives and assigns, to the full end of the term for which Letters Patent, Trademarks, Servicemarks, and Copyrights may be granted, and we do hereby authorize and request the United States Patent and Trademark Office to issue Letters Patent, and to register Trademarks and Servicemarks, and request the United States Copyright Office to register Copyrights, in accordance with this Agreement.

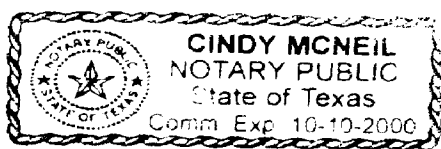
Date: 11 MARCH 1999 Signed: [Signature]

STATE OF TEXAS )  
 )ss.  
COUNTY OF Collin )

On this 11 day of march, 1999, before me personally appeared to me, Kumar Peddanarappagari, known to be the person described in and who executed the foregoing instrument, and who duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

Cindy McNeil  
Notary Public

My Commission expires:  
10/10/2000  
SEAL



STATE OF TEXAS )  
 )ss.  
COUNTY OF \_\_\_\_\_ )