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JCS48 U.S. PTO  
09/215074

12/16/98

To: The Commissioner of Patents and Trademark

Submission Type:

☒ New

Conveyance Type:

☒ Assignment

Conveying Party(ies)

☐ Mark if additional names of conveying parties attached

Name

Vahid Tarokh

Execution Date  
(Month Day Year)

12/15/98

Name

Nambirajan Seshadri

12/16/98

Name

Ye Li

12/17/98

Receiving Party

☐ Mark if additional names of conveying parties attached

Name

AT&amp;T Corp.

Address

P.O. Box 4110

Middletown, NJ 07748

Domestic Representative

Correspondent Name and Address

Name

Henry T. Brendzel

Telephone Number (973) 467-2025

Address

P.O. Box 574

Springfield, NJ 07081

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 are 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)

If this document is being filed together with a new Patent Application,

enter the date on which the patent application was signed by the first named executing inventor.

(Month Day Year)

12/15/98

Patent Cooperation Treaty (PCT)

☐ Mark if additional numbers are attached

Enter PCT application number only if a US Application Number has NOT been assigned

PCT

PCT

PCT

PCT

PCT

Number of Properties

Enter the total number of properties involved

# 1

Fee Amount

Fee Amount for Properties Listed (37 CFR 3.41) \$ 40

Method of payment

Via enclosed Fees Form ☒Enclosed ☐Deposit Account ☐

Authorization to charge additional fees, if necessary

Yes ☒No ☐

Account Number 500732

Statement and Signature

To the best of 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.

Henry T. Brendzel

Name of Person Signing

Signature

Date

2/18/98

For office use only

PATENT  
REEL: 9688 FRAME: 0760

## ASSIGNMENT AND AGREEMENT

For value received, we, Siritiat Lek Ariyavisitakul of Tinton Falls in the County of Monmouth and State of NJ, Ye Li of Atlantic Highlands in the County of Monmouth and State of NJ, Nambirajan Seshadri of Chatham in the County of Morris State of NJ, and Vahid Tarokh of Hackensack in the County of Bergen and State of NJ, hereby sell, assign and transfer to AT&T Corp., a corporation of the State of New York, having an office at 32 Avenue of the Americas, New York, New York 10013-2412, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **Channel Estimation for OFDM Systems With Transmitter Diversity** described in an application for Letters Patent of the United States, executed by us of even date herewith, and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to AT&T Corp. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize AT&T Corp. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of AT&T Corp. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to AT&T Corp. in the United States and in all countries foreign to the United States, or to such nominees as AT&T Corp. may designate.

We agree that, when requested, we shall, without charge to AT&T Corp. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

\_\_\_\_\_  
Siritiat Lek Ariyavisitakul

Date \_\_\_\_\_

United States of America     )  
State of                         )ss.:  
City of                         )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,  
Before me personally came Siritiat Lek Ariyavisitakul, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Ye Li

Date \_\_\_\_\_

United States of America     )  
State of                         )ss.:  
City of                         )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,  
Before me personally came Ye Li, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

\_\_\_\_\_  
Notary Public

Nambirajan Seshadri  
Nambirajan Seshadri

Date Dec. 16, 1998

United States of America )  
State of NEW JERSEY )ss.: 032-62-3199  
City of CHATHAM )

On this 16<sup>th</sup> day of December, 1998

Before me personally came Nambirajan Seshadri, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Margo Baker  
Notary Public

**MARGO BAKER**  
**NOTARY PUBLIC OF NEW JERSEY**  
**Commission Expires 3/10/2003**

Vahid Tarokh  
Vahid Tarokh

Date Dec 15, 1998

United States of America )  
State of New Jersey )ss.: 325-0614528  
City of HACKENSACK )

On this 15<sup>th</sup> day of December, 1998

Before me personally came Vahid Tarokh, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Margo Baker  
Notary Public

**MARGO BAKER**  
**NOTARY PUBLIC OF NEW JERSEY**  
**Commission Expires 3/10/2003**

## ASSIGNMENT AND AGREEMENT

For value received, we, Siritiat Lek Ariyavisitakul of Tinton Falls in the County of Monmouth and State of NJ, Ye Li of Atlantic Highlands in the County of Monmouth and State of NJ, Nambirajan Seshadri of Chatham in the County of Morris State of NJ, and Vahid Tarokh of Hackensack in the County of Bergen and State of NJ, hereby sell, assign and transfer to AT&T Corp., a corporation of the State of New York, having an office at 32 Avenue of the Americas, New York, New York 10013-2412, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **Channel Estimation for OFDM Systems With Transmitter Diversity** described in an application for Letters Patent of the United States, executed by us of even date herewith, and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to AT&T Corp. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions

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We agree that, when requested, we shall, without charge to AT&T Corp. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection

\_\_\_\_\_  
Siritiat Lek Ariyavisitakul

Date \_\_\_\_\_

United States of America     )  
State of                             )ss.:  
City of                             )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,  
Before me personally came Siritiat Lek Ariyavisitakul, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Ye Li

Date 12/7/98

United States of America     )  
State of California     )ss.:  
City of San Jose     )

On this 11 day of December, 1998,  
Before me personally came Ye Li, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

\_\_\_\_\_  
Notary Public

LUCINDA ANN JANDOLI  
NOTARY PUBLIC OF NEW JERSEY  
Commission Expires 8/15/2002

