FORM PTO-1595
(REv. 6-93)
OMB-0651-0011

To the Honorable Commissioner of Patents and Trademarks:

1. Name of conveying party(ies):
   1. Jung-Tao Liu
   2. Ashok N. Rudrapatna

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

3. Nature of conveyance:
   ☑ Assignment ☐ Merger
   ☐ Security Agreement ☐ Change of Name
   ☐ Other ________________________________


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) 10/334314

   Additional numbers attached? ☑ Yes ☐ No

B. Patent No.(s) ______________________

5. Name and address of party to whom correspondence concerning document should be mailed:
   Name: Docket Administrator
   Internal Address: Room 3J-219
   Street Address: 101 Crawfords Corner Road
   City: Holmdel State: NJ ZIP: 07733-3030

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) $40.00
   ☐ Enclosed ☑ Authorized to be charged to deposit account

8. Deposit account number: 12-2325
   (Attach duplicate copy of this page if paying by deposit account)

   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.

   Stephen M. Gurey
   Name of Person Signing
   Signature

   April 4, 2003
   Date

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

Case Number: Liu 12-32

4/11/2003 DONALD B. BYRNE
00000000 00000010 123225
10334888

01 FC:8021

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, DC 20231, on April 4, 2003.

Margaret Cardoso

REEL: 013936 FRAME: 0421
ASSIGNMENT AND AGREEMENT

For value received, we, Jung-Tao Liu, of Randolph in the County of Morris and the State of New Jersey, and Ashok N. Rudrapatna, of Basking Ridge in the County of Somerset and the State of New Jersey, hereby sell, assign and transfer to Lucent Technologies Inc., a corporation of the State of Delaware, having an office at 600 Mountain Avenue, Murray Hill, New Jersey, 07974-0636, 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 Method Of Determining The Capacity Of Each Transmitter Antenna In A Multiple Input/Multiple Output (MIMO) Wireless System described in an application for Letters Patent of the United States, Serial No. 10/334314, filed December 31, 2002, 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 Lucent Technologies Inc. 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 Lucent Technologies Inc. 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 Lucent Technologies Inc. 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 Lucent Technologies Inc. in the United States and in all countries foreign to the United States, or to such nominees as Lucent Technologies Inc. may designate.
We agree that, when requested, we shall, without charge to Lucent Technologies Inc. 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.

Jung-Tao Liu

Date: 3-3-03

United States of America )
State of New Jersey ) ss.: 
County of Morris )

On this 3rd day of March, 2003, before me personally came, Jung-Tao Liu to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Margaret Cardoso
Notary Public

MARGARET CARDOSO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Dec. 02, 2003
Date: March 3, 2003

United States of America

State of New Jersey ss.

County of Morris

On this 3rd day of March, 2003, before me personally came, Ashok N. Rudrapatna to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Margaret Cardoso
Notary Public

MARGARET CARDOSO
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires Dec. 02, 2003

Lucent Technologies Inc.
Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

RECORDED: 04/09/2003

PATENT
REEL: 013936 FRAME: 0424