***-~ey Docket No. 29250-000599 12-13-2001 U.S. DEPARTMENT OF COMMERCE Form **PTO-1595** RECOF U.S. Patent and Trademark Office (Rev. 03/01) OMB No. 0651-0027 (exp. 5/31/2002) 101914572 To the Honorable Commissioner of Pa d original documents or copy theregate 1. Name of conveying party(ies): 2. Name and address of receiving party(ies) Ashok RUDRAPATNA and Naresh SHARMA Name: Lucent Technologies Internal Address: Additional name of conveying party(ies) attached?
Yes
No MRD 11-16-01 3. Nature of conveyance: Street Address: 600 Mountain Avenue Merger Change of Name Security Agreement State: NJ Zip: 07974 City: Murray Hill Other _____ Additional Name(s) & address(es) attached?
Yes
No Execution Date(s): November 15, 2001 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: November 15, 2001 B. Patent No.(s) A. Patent Application No.(s) 10004024 Additional numbers attached? ☐ Yes ☐ No 6. Total number of applications and/or patents involved: 1 5. Name and address of party to whom correspondence concerning this document should be mailed: 7. Total fee (37 CFR 3.41) \$ 40.00 Name: Internal Address: Harness, Dickey & Pierce, P.L.C. Enclosed 8. The Commissioner is hereby authorized to charge any additional fees that may be required or credit any overpayments to Deposit Account No. 12-2325. A duplicate Street Address: P.O. Box 8910 copy of this sheet is enclosed. Zip: 20195 State:VA City:Reston 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. November 16, 2001 Gary D. Yacura Date

> Total number of pages including cover sheet, attachments, and documents: 3 Mail documents to be recorded with required cover sheet information to:

> > Washington, D.C. 20231

Commissioner of Patents & Trademarks, Box Assignments

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PATENT REEL: 012354 FRAME: 0045 Lucent Ref. No.: 124545/Rudrapatna 23-2 Attorney Docket No. 29250-000599

ASSIGNMENT AND AGREEMENT

For value received, we Ashok RUDRAPATNA of Basking Ridge in the County of Somerset and State of New Jersey; and Naresh SHARMA of Budd Lake in the County of Morris and 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 SYSTEM ENCODING FOR MULTI-ANTENNA TRANSMITTER DECODING SYSTEM FOR MULTI-ANTENNA RECEIVER 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 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. 1 2 m, 1 2 1 2 3

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.

PATENT REEL: 012354 FRAME: 0046 Lucent Ref. No.: 124545/Rudrapatna 23-2 Attorney Docket No. 29250-000599

United States of America

State of Kow Jersey

County of Therru

day of November 2001, before me personally came, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

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

United States of America

On this 1675 day of November, 2001, before me personally came Sharma, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

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

Lucent Technologies Inc. 600 Mountain Avenue (Room 3C-512) P. O. Box 636 Murray Hill, New Jersey 07974-0636

RECORDED: 11/16/2001

PATENT REEL: 012354 FRAME: 0047