05-10-1999

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To: The Commissioner of	Patents and Trac	01033168	ginal document(s	s) or copy(ies)	
Submission Type:	N N	Conveyance Typ	pe:	ň	
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Conveying Party(ies)	Mark if ad-	ditional names of account	ving parties are attached	Execution Date	
Name	Ayman Naguib	ndonal names of convey	ying parties are attached	(Month Day Year) 4/27/99	
Name	Nambirajan Sehshadri			4/27/99	
Name	Arthur Robert Calderba	ınk		4/27/99	
Name					
Receiving Party	Mark if add	itional names of receivir	ng parties are attached		
Name Address	AT&T Corp.		• -	,	
, , , , , , , , , , , , , , , , , , , ,	P.O. Box 4110 Middletown, NJ 07748		09300494	1	
Domestic Representative			09300499 MRD 4.28	3.99	
Correspondent Name and					
Name Address	Henry T. Brendzel P.O. Box 574	T	elephone Number (973) 4	67-2025	
	Springfield, NJ 07081				
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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) 4/27/99					
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	<u>v</u> if a US Application Number has NOT b CT PCT		CT DO	_	
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Number of Properties		Enter the total num	ber 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 addit	tional fees, if necessary Ye	es No 🗌	Account Number	500732	
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original document. Cha	e and belief, the foregoing inform rges to deposit account are author	าสแอก เร true and corr orized, as indicated h	rect and any attached copy is erein.	a true coy of the	
Henry T. Brendzel		1/2 / 1	7	4/21/20	
Name of Person Signing	Signature	sunger!	<u> </u>	// 28/87	
Name of Person Signing Signature Date For office use only					
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REEL: 9930 FRAME: 0345

ASSIGNMENT AND AGREEMENT

For value received, we, Arthur Robert Calderbank of Princeton in the County of Mercer and State of NJ, Ayman Naguib of New Providence in the County of Union and State of NJ, and Nambirajan Seshadri of Chatham in the County of Morris 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 Combined Channel Coding and Space-Block Coding In a Multi-Antenna Arrangement 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.

PATENT REEL: 9930 FRAME: 0346

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.
Arthur Robert Calderbank
Date 4/27/99
United States of America) State of NJ)ss.: County of NOW)
On this
ROBIN J. BADDERS NOTARY PUBLIC OF NEW JERSEY Commission Expires 11/30/2003
Ayman Naguib
Date 4/27/79
United States of America) State of NJ)ss.: County of Mondo)
On this day of day of pril, 1999, Before me personally came Ayman Naguib, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.
Notary Public

ROBIN J. BADDERS
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 11/30/2003

PATENT REEL: 9930 FRAME: 0347

Nambirajan Seshadri On this 37 day of 40 day of 1999,
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

Notary Public Dadders

ROBIN J. BADDERS NOTARY PUBLIC OF NEW JERSEY Commission Expires 11/30/2003

RECORDED: 04/28/1999

)ss.:

Date 4/27/98

United States of America

State of

County of

the same.

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wrran

On this 27th

PATENT REEL: 9930 FRAME: 0348