08-27-2002

U.S. DEPARTMENT OF COMMERCE ET PTO-1595 REC U.S. Patent And Trademark Office ... 03/01) (modified) OMB No. 0651-0027 (exp 5/31/2002) To the Honorable Commissioner For Patents: Please record the attached original documents or copy thereof: 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Guozhu Long; Les Brown; Sanjay Gupta Centillium Communications, Inc. Additional name(s) of conveying party(ies) attached? Internal Address: Yes 3. Nature of Conveyance: Street Address: 47211 Lakeview Boulevard Massignment Merger Security Agreement Change of Name City: Fremont State: CA Zip: 94538 Other: Additional name(s) & address(es) attached? Execution Date: 7/23/2002; 7/25/2002; 8/8/2002

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 B. Patent No.(s): 4. Application number(s) or patent number(s): 10/187,388 Additional numbers attached? 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: [1] concerning document should be mailed: Name: Neil F. Maloney, Esq. 7. Total fee (37 CFR 3.41): \$40.00 Check Enclosed Internal Address: Fenwick & West LLP Street Address: Two Palo Alto Square Fee Transmittal Enclosed Zip Code: 94306 City: Palo Alto State: CA Charge the indicated fees to the below mentioned deposit account. 00000129 10187388 0A/26/2002 TDIAZ1 8. Deposit Account No.: 01 FC:581 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.

Total number of pages including cover sheet, attachments, documents: [4]

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

Neil F. Maloney, Reg. No. 42,833 Name of Person Signing

Case Docket No.:

21676-06951 (CT-91)

21676/06951/SF/5081905.1

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to Centillium Communications, Inc., a Delaware corporation, having a place of business at 47211 Lakeview Boulevard, Fremont, California 94538, ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1.	The	entire	worldw	ide	right,	title,	and	interest	in	all	inver	ntions	and
improvement	s ("SU	JBJECT	г матт	ER'	') that	are dis	sclos	ed in the	pro	visi	onal	applic	cation
filed under 3	35 U.S	S.C. §1	111(b) o	r no	n-prov	<mark>zision</mark> a	l app	olication	file	d u	nder	35 L	J.S.C.
§111(a) and	entitle	d Syno	CHRONIZ	ING	Initiai	L HANI	DSHA	KE IN A	DSL	AN	INEX	Сто	TTR
("APPLICAT	ION")	, which	1 :										

	is to be filed herewith		
\boxtimes	was filed on <u>June 28, 2002</u> ,		
	now bearing U.S. application number	10/187,388	; and

- 2. The entire worldwide right, title, and interest in and to:
- (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION; (c) all utility, divisional, continuation, substitute, renewal, reissue, and other related applications thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the applications set forth in (a), (b), (c) and (d) above; and (e) all right of priority in the APPLICATION, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

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PATENT

Title:	SYNCHRONIZING INITIAL HAN	DSHAKE IN ADSL A	NNEX C TO TTR	
Filed:	June 28, 2002			
Application No.:	10/187,388			
This Assignment deemed an original and al	-	-	parts, each of which shall be d the same Assignment.)e
Name and Signature		Date of Signature	Date Declaration Executed By This Person	1
Guozhu Long		7/23	2002 7/23 ,2002	
State of				
County of	}			
On	DATE] before me	>,	personally	
			Y PUBLIC] pasis of satisfactory evidence to	
be the person whose name is s	ubscribed to the within instrung, and that by his signature on t	nent and acknowled	ged to me that he executed the erson, or the entity upon behalf	
Notary Seal		N	Notary	
Name and Signature Les Brown		Date of Signature 7/25	Date Declaration Executed By This Person 2002 7/25, 2002	:
State ofCounty of	}S.S.			
appeared <u>Les Brown</u> p the person whose name is subs	cribed to the within instrument if that by his signature on the i	ed to me on the basi and acknowledged to	personally Y PUBLIC] s of satisfactory evidence to be o me that he executed the same on, or the entity upon behalf of	
Notary Seal		N	Notary	

Title of Document: ASSIGNMENT

Case Docket # 21676 06951 (CT-91)

Re:

2 of 3

PATENT

Re: Title: Filed: Application No.:	SYNCHRONIZING INITIAL HANDSHAKE June 28, 2002 10/187,388	IN ADSL ANNEX (С то ТТК
Name and Signature Sanjay Gopta		<u>ire</u>	Date Declaration Executed By This Person 8 / 8 , 2002
State ofCounty of	}\S.S.		
appeared Sanjay Gupta be the person whose name is s	before me,	me on the basis of acknowledged to	f satisfactory evidence to me that he executed the
Notary Seal		Notary	

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Case Docket #_21676-06951 (CT-91)

RECORDED: 08/22/2002

Title of Document: ASSIGNMENT

21676/06951/SF/5080122.1