

**PATENT ASSIGNMENT**

Electronic Version v1.1  
 Stylesheet Version v1.1

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
Conexant Systems, Inc.	08/24/2009
Conexant, Inc.	08/24/2009
Brooktree Broadband Holding Inc.	08/24/2009
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Ikanos Communications, Inc.
<b>Street Address:</b>	47669 Fremont Boulevard
<b>City:</b>	Fremont
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94538
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13091651
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(770)951-0933
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
<b>Phone:</b>	770-933-9500
<b>Email:</b>	julie.campbell@tkhr.com
<b>Correspondent Name:</b>	Thomas, Kayden, Horstemeyer & Risley LLP
<b>Address Line 1:</b>	600 Galleria Parkway
<b>Address Line 2:</b>	Suite 1500
<b>Address Line 4:</b>	Atlanta, GEORGIA 30339
<b>ATTORNEY DOCKET NUMBER:</b>	050912-1501
<b>NAME OF SUBMITTER:</b>	Scott A. Horstemeyer

OP \$40.00 13091651

Total Attachments: 24  
 source=01376658#page1.tif

**501549073**

**PATENT**  
**REEL: 026363 FRAME: 0410**

source=01376658#page2.tif  
source=01376658#page3.tif  
source=01376658#page4.tif  
source=01376658#page5.tif  
source=01376658#page6.tif  
source=01376658#page7.tif  
source=01376658#page8.tif  
source=01376658#page9.tif  
source=01376658#page10.tif  
source=01376658#page11.tif  
source=01376658#page12.tif  
source=01376658#page13.tif  
source=01376658#page14.tif  
source=01376658#page15.tif  
source=01376658#page16.tif  
source=01376658#page17.tif  
source=01376658#page18.tif  
source=01376658#page19.tif  
source=01376658#page20.tif  
source=01376658#page21.tif  
source=01376658#page22.tif  
source=01376658#page23.tif  
source=01376658#page24.tif

**INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT**

This INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT (this "Assignment") is effective as of August 24, 2009, by and between Conexant Systems, Inc., a Delaware corporation (the "Seller"), and Seller's subsidiaries Conexant, Inc., a Delaware corporation, and Brooktree Broadband Holding Inc., a Delaware corporation, on the one hand, and Ikanos Communications, Inc., a Delaware corporation (the "Assignee"), on the other hand. Unless otherwise defined herein, capitalized terms shall have the meanings set forth in the Purchase Agreement (as defined below).

**RECITALS**

WHEREAS, the Seller and Ikanos Communications, Inc., a Delaware corporation ("Purchaser") have entered into that certain Asset Purchase Agreement, dated as of April 21, 2009 (the "Purchase Agreement"), pursuant to which, among other things, Assignee is acquiring certain Intellectual Property Rights on the terms and subject to the conditions set forth therein;

WHEREAS, the Seller, Conexant, Inc. and Brooktree Broadband Holding Inc. (collectively the "Assignor") are owners of record of, or have rights in, certain of the Intellectual Property Rights;

WHEREAS, this Assignment is required to be executed and delivered by Seller on or prior to the Closing Date, pursuant to Sections 5.5 and 6.6 of the Purchase Agreement; and

WHEREAS, this Assignment is a Local Purchase Agreement.

**ASSIGNMENT**

NOW, THEREFORE, for good and valuable consideration, including that recited in the Purchase Agreement, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1. Assignment of Intellectual Property Rights. Assignor does hereby irrevocably sell, convey, transfer, and assign to Assignee all of the right, title, and interest Assignor has in and to all U.S. Registered IP, and all applications therefor (the "Assigned IP"), including without limitation, the specific items set forth below:

(a) all Patents, pending patent applications and invention disclosures listed in Attachment I hereto; and

(b) all Copyright registrations listed in Attachment II hereto.

2. Assistance and Cooperation. This Assignment is effective between the parties on the date hereof. Assignor further agrees, subject to Section 3 (Perfection and Recordation) below, to perform (or cause to be performed) all such lawful acts and to execute (or cause to be executed) all such further assignments and other lawful documents as may reasonably be necessary to effectuate the assignment under this Assignment and to perfect and record such

assignment in the various jurisdictions and permit for the orderly transition of the prosecution and maintenance of such Assigned IP from Assignor to Assignee. Such assistance shall include, without limitation, Assignor providing: (a) a list of contact information for all third parties responsible for prosecuting and maintaining the Assigned IP ("Counsel"); (b) a letter to all such Counsel informing them of the change of ownership of the Assigned IP from Assignor to Assignee including language reasonably acceptable to Assignee informing and instructing such Counsel (i) to cooperate with the Assignee, (ii) that it is Assignee's desire to continue prosecution uninterrupted with them and that Assignor does not object to such parties' representation of Assignee with respect to prosecution of the Assigned IP, and (iii) that all further actions with respect to the Assigned IP will be at the expense of the Assignee; (c) powers of attorney and powers to inspect or copy in forms reasonably acceptable to Assignee with respect to priority documents relating to items of Assigned IP identified by Assignee; and (d) the re-execution of assignments in a form reasonably acceptable to Assignee for those items of Assigned IP identified by Assignee, as required by local law and practice.

3. Perfection and Recordation. With respect to all Assigned IP not assigned hereunder for which an Affiliate of Seller is the owner of record, Seller will cause an authorized representative of each such Affiliate to execute a document substantially similar to this Assignment assigning to Assignee all such Assigned IP. Seller shall be responsible for all expenses of it and its Affiliates associated therewith. Assignee shall prepare all additional documents that are necessary to perfect and record the assignments of the Assigned IP to Assignee in the various jurisdictions, and Assignee shall be responsible for all of its own expenses, including recordation expenses, associated therewith. Seller shall be responsible for all of its own expenses associated with the review and execution thereof.

4. Entire Agreement. This Assignment (including all Attachments hereto), the Purchase Agreement (including the all Schedules and Exhibits thereto), the Confidentiality Agreement (which remains in full force and effect) and the other Ancillary Agreements set forth the entire understanding of the parties and supersede all prior agreements and understandings, oral or written, between the parties relating to the subject matter hereof and thereof.

5. Binding Assignment. This Assignment shall be binding upon and inure to the benefit of the parties hereto and their respective successors and permitted assigns.

6. Governing Law; Submission to Jurisdiction; Selection of Forum; Waiver of Trial By Jury. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS ASSIGNMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF DELAWARE. THE ASSIGNOR AND THE ASSIGNEE HEREBY IRREVOCABLY SUBMIT TO THE NON-EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN ORANGE COUNTY, CALIFORNIA OR SANTA CLARA COUNTY, CALIFORNIA (AS MUTUALLY AGREED BY THE PARTIES) FOR THE ADJUDICATION OF ANY DISPUTE BROUGHT BY THE ASSIGNOR OR THE ASSIGNEE HEREUNDER, IN CONNECTION HEREWITH OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN, AND HEREBY IRREVOCABLY WAIVE, AND AGREE NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING BROUGHT BY THE ASSIGNOR OR THE ASSIGNEE, ANY CLAIM THAT

IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT, OR THAT SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. EACH PARTY, AFTER CONSULTING OR HAVING HAD THE OPPORTUNITY TO CONSULT WITH COUNSEL, EACH KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVE IRREVOCABLY, ANY RIGHT TO A TRIAL BY JURY IN ANY ACTION OR PROCEEDING TO ENFORCE OR DEFEND ANY RIGHTS ARISING OUT OF OR RELATING TO THIS IP AGREEMENT AND SUCH PROCEEDING SHALL BE TRIED BEFORE A COURT AND NOT BEFORE A JURY.

7. Severability. In the event that any provision of this Assignment, or the application of such provision to any Person or set of circumstances, shall be determined to be invalid, unlawful, void or unenforceable to any extent, (a) a suitable and equitable provision shall be substituted therefore in order to carry out, as far as may be valid and enforceable, the intent and purpose of such invalid or unenforceable provision and (b) the remainder of this Assignment and the application of such provision to Persons or circumstances other than those as to which it is determined to be invalid, unlawful, void or unenforceable, will not be affected and will continue to be valid and enforceable to the fullest extent permitted by law.

8. Counterparts. This Assignment may be executed in several counterparts, each of which will constitute an original and all of which, when taken together, will constitute one and the same Assignment.

9. Headings. The section headings contained in this Assignment are inserted for reference purposes only and are not intended to be a part, nor should they affect the meaning or interpretation, of this Assignment.

10. Amendments. This Assignment may not be amended, modified, altered or supplemented except by means of a written instrument executed by Assignor and Assignee.

*(Signature Pages Follow.)*









**BROOKTREE BROADBAND HOLDING, INC.**

By: [Signature]  
Name: Mark Peterson  
Its: Director

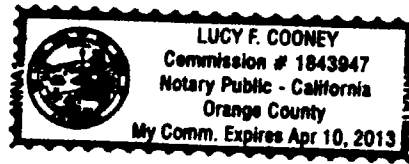
STATE OF CALIFORNIA )  
 )  
COUNTY OF ORANGE )

On August 21, 2009 before me, Lucy F. Cooney, Notary Public, personally appeared Mark Peterson who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

[Signature]  
Notary Public



(Place Notary Seal Above)

[Signature Page 3 of 3 to Intellectual Property Assignment Agreement]

Attachment I

Assigned Patents and Patent Applications

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
23439	US	Granted	09/394,619	9/13/1999	6,252,902	6/26/2001	XDSL Modem Having DMT Symbol Boundary Detection
23440	US	Granted	09/394,091	9/13/1999	6,233,276	5/15/2001	XDSL Modem Having Time Domain Filter for ISI Mitigation
8479041	US	Published	10/947,600	9/22/2004			Method and Apparatus for Adaptive Hybrid Termination in a Multi-Carrier Communication System
8479042	US	Granted	09/541,715		6,738,418		Method and Apparatus for Adaptive Data Allocation in a Multi-Carrier Communications System
032478002	US	Granted	09/281,903	3/31/1999	6,542,477	4/1/2003	Digitally-Tunable Echo-Cancelling Analog Front End for Wireline Communications Devices
032478005	US	Granted	09/639,515	8/15/2000	6,934,328	8/23/2005	Relaxed, More Optimum Training for Modems and the Like
607041030	US	Granted	08/690,243	7/19/1996	5,751,701	5/12/1998	Rate Adaptive Digital Subscriber Line (RADSL) Modem
607041030	US	Granted	09/016,994	2/2/1998	6,167,034	12/26/2000	Rate Adaptive Digital Subscriber Line (RADSL) Modem
607041080	US	Granted	08/974,395	11/19/1997	6,067,316	5/23/2000	Circuit for Combined XDSL and Other Services
607041440	US	Granted	09/050,474	3/10/1998	5,852,630	12/22/1998	System and Method for a RADSL Transceiver Warm Start Activation Procedure with Precoding
607041450	US	Granted	09/113,468	7/10/1998	6,219,386	4/17/2001	Frameless Reed-Solomon Coding System and Method
607041470	US	Granted	08/932,899	9/18/1997	6,301,337	10/9/2001	Combined Handset and POTS Filter
607041480	US	Granted	08/944,941	10/2/1997	5,970,098	10/19/1999	Multilevel Encoder
607041490	US	Granted	08/953,082	10/17/1997	5,991,336	11/23/1999	System and Method for Optimizing High Speed Data Transmission

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
607041490	US	Granted	09/045,434	3/20/1998	6,009,132	12/28/1999	System and Method for Obtaining Clock Recovery from a Received Signal in a Communication System
607041510	US	Granted	09/014,813	1/28/1998	6,144,733	1/17/2000	Ring Filter for POTS Communication System
607041530	US	Granted	09/022,564	2/12/1998	6,208,732	3/27/2001	Switched Hybrid Circuit for Use with Digital Subscriber Lines
607041610	US	Granted	09/127,414	7/31/1998	6,385,234	5/7/2002	Transceiver Circuit and Method
607041630	US	Granted	09/164,552	10/1/1998	6,421,377	7/16/2002	System and Method for Echo Cancellation Over Asymmetric Spectra
607041690	US	Granted	09/303,730	5/31/1999	6,353,644	3/5/2002	System and Method for Performing Time Domain Equalization
607041720	US	Granted	09/156,158	9/17/1998	6,466,588	10/15/2002	Apparatus for Facilitating Combined POTS and xDSL Services at a Customer Premises
607041720	US	Granted	10/199,270	7/18/2002	6,608,842	8/19/2003	Apparatus for Facilitating Combined POTS and xDSL Services at a Customer Premises
607041740	US	Granted	09/248,440	2/11/1999	6,621,859	9/16/2003	Combined Cable and DSL Modem for High Speed Data Communication
607041860	US	Granted	09/357,706	7/20/1999	6,725,059	4/20/2004	System and Method for Improving Communications Between a Digital Loop Carrier and a Central Office
607041870	US	Granted	09/357,720	7/21/1999	7,177,910	2/13/2007	System and Method for Communicating in a Point-to-Multipoint DSL Network
607041880	US	Granted	09/373,841	8/13/1999	6,584,160	6/24/2003	System and Method for Reducing the Effects of Clipping in a DMT Transceiver
607041920	US	Granted	09/384,672	8/27/1999	6,281,829	8/28/2001	Multi-Mode Analog Front End
607041930	US	Granted	09/384,671	8/27/1999	6,580,760	6/17/2003	Line Driver Architecture with Programmable Gain and Drive
607041970	US	Granted	09/523,747	3/13/2000	6,480,976	11/12/2002	System and Method for Resource Optimized Integrated Forward Error Correction in a DMT Communication System
607041980	US	Granted	09/524,464	3/13/2000	6,536,001	3/18/2003	Circuit and Method for Convolutional Interleaving Using Single Modulo Operation

NB1:781708

Attachment I - 2

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
607042410	US	Expired	07/386,753	7/31/1989	5,146,494	9/8/1992	Overlapping Look-Up-And-Add Echo Canceller Requiring a Smaller Memory Size
607051070	US	Granted	09/456,451	12/8/1999	6,266,347	7/24/2001	System and Method for Modifying Symbol Duration for the Efficient Transmission of Information in a Time Duplex Noise Environment
607051070	US	Granted	09/457,017	12/8/1999	6,580,752	6/17/2003	Alternative Configurations for an ADSL System Operating in a Time Duplex Noise Environment
607051090	US	Granted	09/425,396	10/22/1999	6,490,639	12/3/2002	Peripheral Component Interconnect (PCI) Single Channel Master Direct Memory Access (DMA) Serving Two Separate Channels
607051120	US	Granted	09/470,798	12/23/1999	6,587,502	7/1/2003	System and Method for Profile Selection During Fast Retrain of a Wideband Modem
607051130	US	Granted	09/471,310	12/23/1999	6,760,348	7/6/2004	System and Method for Tone Detection in a Discrete Multi-Tone System
607051140	US	Granted	09/471,685	12/23/1999	6,646,994	11/11/2003	System and Method for Controlling Distortion in the POTS Band in a Dual POTS and Discrete Multi-Tone Communications System
607051210	US	Granted	09/496,793	2/2/2000	6,985,548	1/10/2006	System and Method for Timing Recovery in a Discrete Multi-Tone System
607051250	US	Granted	09/578,763	5/25/2000	6,785,296	8/31/2004	System and Method for Providing Bandwidth Management Within a Small Office, Home Office Network
607051300	US	Granted	09/602,413	6/23/2000	6,583,662	6/24/2003	Circuit and Method for Implementing an Integrated Continuous-Time Smoothing Filter
607051330	US	Granted	09/637,748	8/11/2000	6,351,185	2/26/2002	Increased Output Swing Line Drivers for Operation at Supply Voltages Exceeding the Breakdown Voltage of the Technology
607051330	US	Granted	10/047,180	11/9/2001	6,756,846	6/29/2004	Increased Output Swing Line Drivers for Operation at Supply Voltages Exceeding the Breakdown Voltage of the Technology
607051340	US	Granted	09/637,747	8/11/2000	6,538,510	3/25/2003	High Efficiency, Current Sink Only Line Driver
607051350	US	Granted	09/640,123	8/16/2000	6,765,954	7/20/2004	System and Method for Implementing a Delta-Sigma Modulator Integrity Supervisor

NBI:781708

Attachment I - 3

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
607051350	US	Granted	10/786,669	2/25/2004	7,555,036	6/30/2009	System and Method for Implementing a Delta-Sigma Modulator Integrity Supervisor
607051350	US	Granted	10/786,670	2/25/2004	7,558,316	7/7/2009	System and Method for Implementing a Delta-Sigma Modulator Integrity Supervisor
607051370	US	Granted	09/862,911	5/22/2001	6,956,872	10/18/2005	System and Method for Encoding DSL Information Streams Having Differing Latencies
607051390	US	Granted	09/689,053	10/12/2000	6,804,318	10/12/2004	System and Method for Using a Network Timing Reference Circuit as a Phase Detector in a Synchronization Loop
607051430	US	Granted	09/715,293	11/17/2000	6,788,745	9/7/2004	Differential Line Driver Circuit with Active Termination
607051430	US	Granted	09/892,003	6/26/2001	6,801,621	10/5/2004	Active Terminator Line Interface
607051520	US	Granted	09/746,873	12/22/2000	6,813,325	11/2/2004	System and Method to Reduce Transmit Wander in a Digital Subscriber Line
607051560	US	Granted	09/793,172	2/26/2001	6,971,057	11/29/2005	Efficient Method for DMT Convolutional Interleaving/Deinterleaving
607051570	US	Granted	09/815,509	3/23/2001	6,658,499	12/2/2003	Joint Negotiation of ADSL and USB Bandwidth for an ADSL USB Modem
607051590	US	Granted	09/819,325	3/28/2001	6,909,781	6/21/2005	DSL Line Tester
607051610	US	Granted	09/862,952	5/22/2001	7,010,025	3/7/2006	Circuit and Method for an Improved Front End in Duplex Signal Communication Systems
607051670	US	Granted	09/808,760	3/15/2001	6,999,504	2/14/2006	System and Method for Canceling Crosstalk
607051710	US	Granted	09/888,735	6/25/2001	7,031,378	4/18/2006	Unified DSL Transceiver
607051830	US	Granted	09/939,439	8/24/2001	7,068,780	6/27/2006	Hybrid Echo Canceller
607051910	US	Granted	09/971,484	10/5/2001	6,894,580	5/17/2005	Filter Tuner System and Method
607051930	US	Granted	09/975,446	10/11/2001	6,922,444	7/26/2005	Adaptive Rate Selection Method with Performance Consideration of Impulse Noise Protection
607061060	US	Granted	10/014,315	12/11/2001	6,741,701	5/25/2004	Dual Echo Canceller and Method for Increasing Dynamic Range of a Receiver
607061070	US	Granted	10/021,199	10/30/2001	7,154,895	12/26/2006	System, Apparatus and Method for ATM Header

NBI:781708

Attachment I - 4

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
							Compression for DSL Links
607061150	US	Granted	10/021,591	10/30/2001	7,016,489	3/21/2006	System and Method for Predforming Echo Cancellation for Non-Linearities
607061170	US	Granted	10/039,144	1/4/2002	6,580,286	6/17/2003	Method and Apparatus for Active Line Termination
607061180	US	Granted	10/044,726	1/11/2002	6,531,902	3/11/2003	A Line Driver Operative from a Single Supply and Method for Supplying Voltages to a Load
607061210	US	Granted	10/120,941	4/10/2002	7,142,595	11/28/2006	System and Method for Decreasing Cross-Talk Effects in Time-Domain-Modulation (TDM) Digital Subscriber Line (DSL) Systems
607061490	US	Granted	10/138,365	5/3/2002	7,133,419	11/7/2006	System and Method for Reducing Power Consumption by Spectral Shaping of Signals
607061590	US	Granted	10/315,743	12/10/2002	6,829,251	12/7/2004	System and Method for Increasing Data Capacity in Communication Systems
607061600	US	Granted	10/211,820	8/2/2002	7,436,849	10/14/2008	System and Method for Partitioning a DSLAM Network
607061610	US	Granted	10/214,341	8/6/2002	7,061,987	6/13/2006	Wide-Band Analog Front-End for DSL Applications
607061620	US	Granted	10/213,483	8/6/2002	6,741,120	5/25/2004	Improved Active Filter and Method
607061630	US	Granted	10/213,476	8/6/2002	6,696,869	2/24/2004	A Buffer Circuit for a High-Bandwidth Analog to Digital Converter
607061640	US	Granted	10/213,502	8/6/2002	6,650,177	11/18/2003	System and Method for Tuning an RC Continuous-Time Filter
607061660	US	Granted	10/224,726	8/20/2002	7,103,097	9/5/2006	System and Method for Reducing Peak-to-Average Ratio (Par) Values
02CXT0015C	US	Granted	10/245,982	9/18/2002	7,489,693	2/10/2009	Method and Apparatus for Automatically Detecting Virtual Circuit Settings and Encapsulation Types in a DSL Network
05CXT0020DL	US	Published	11/559,772	11/14/2006			Improved Bit-Loading for Discrete Multi-Tone Modulated Multiple Latency Applications
05CXT0095DL	US	Published	11/513,096	8/31/2006			Techniques to Resolve SNR-Margin Difference between Fast and Interleave Channels under

NBI:781708

Attachment I - 5

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
							Colored Noise Condition for DMT-Based DSL System
05CXT0110DL	US	Pending <i>NA</i>	11/513,089	8/31/2006			Minimum Power Leakage Windowing for VDSL Using Least Square Technique
05CXT0145D	US	Granted	10/054,294	11/13/2001	6,804,292	10/12/2004	Broadband I/O Circuits, Interface and Bus
05CXT0146D	US	Granted	09/235,235	2/22/1999	6,345,072	2/5/2002	Universal DSL Link Interface Between A DSL Digital Controller and A DSL Codec
05CXT0147D	US	Granted	10/054,327	11/13/2001	6,904,083	6/7/2005	DSL LINK WITH EMBEDDED CONTROL AND MULTI-CHANNEL CAPABILITY
05CXT0149D	US	Granted	09/701,810	12/1/2000	6,771,697	8/3/2004	SPREAD SPECTRUM HANDSHAKE FOR DIGITAL SUBSCRIBER LINE TELECOMMUNICATIONS SYSTEMS
05CXT0158DL	US	Published	11/315,372	12/23/2005			Bit-Loading Method and System for a DMT Transceiver
05CXT0176D	US	Granted	09/263,160	3/5/1999	6,570,912	5/27/2003	Hybrid Software/Hardware Discrete Multi-Tone Transceiver
05CXT0177D	US	Granted	09/893,383	6/27/2001	6,567,465	5/20/2003	DSL Modem Utilizing Low Density Parity Check Modes
05CXT0178D	US	Granted	10/054,410	11/13/2001	6,836,510	12/28/2004	DSL Link With Scalable Performance
06CXT0002DS	US	Published	11/686,420	3/15/2007			Configuring Transmission Signals
06CXT0009DS	US	Published	11/712,125	2/28/2007			Downstream Power Back-Off for Fiber to Node Applications
06CXT0031DS	US	Published	11/940,268	11/14/2007			Multiplexing/Demultiplexing On A Shared Interface
06CXT0044DS	US	Published	12/044,443	3/7/2008			Systems and Methods for Loop Length Estimation Based on Per-Port Calibration
06CXT0044DS	US	Published	12/044,489	3/7/2008			Systems and Methods for Bridge Tap Detection Based on Per-Port Calibration
06CXT0044DS	US	Published	12/044,531	3/7/2008			Systems and Methods for Loop Termination Detection Based on Per-Port Calibration
06CXT0044DS	US	Published	12/044,556	3/7/2008			Systems and Methods for Loop Gauge Detection Based on Per-Port Calibration

NBI:781708

Attachment I - 6

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
07CXT0008DS	US	Published	12/114,169	5/2/2008			Reducing the Effect of Noise in a Multi-Channel Telecommunication Receiver
07CXT0011DS	US	Published	11/845,040	8/25/2007			Systems and Methods for MIMO Precoding in an xDSL System
07CXT0016DS							Systems and Methods for Performing Loop Analysis Based on Un-Calibrated Single-Ended Line Testing
07CXT0023DS	US	Published	12/100,355	4/9/2008			BACK CHANNEL COMMUNICATION
07CXT0025DS	US	Published	12/109,566	4/25/2008			Crosstalk Recognition in Presence of Radio Frequency Interference
07CXT0035DS	US	Published	12/138,731	6/13/2008			Transmit-Only Peak-to-Average Ratio Reduction in the Oversampled Regime Using Reserved Tones
07CXT0036DS							Systems and Methods for Positioning and Messaging of Reserved Tones for Peak-to-Average Ratio (PAR) Reduction in DSL Systems
07CXT0043DS							Cognitive and Universal Impulse Noise Protection
07CX:							Low Complexity Systems and Methods for Peak-to-Average Ratio (PAR) Reduction Using Reserved Tones
07CXT0060DS							ptive Turbo Peak Mitigation for Peak-to-Average Ratio (PAR) Reduction Using Reserved Tones
07CXT0082DS	US	Pending / Pub	12/036,035	2/22/2008			S&M for Deriving Parameters for Impulse Noise Detectors
07CXT0087DS	US	Published	12/123,925	5/20/2008			System and Methods for Mitigating the Effects of Upstream Far-End Cross Talk
07CXT0093DS							Systems and Methods for Performing Combined Equalization in Communication Systems
07CXT0094DS							Proposed Framework for Retransmission above the Gamma-Interface
07CXT0099DS							SYSTEMS AND METHODS FOR

*Redacted*

*Redacted*

*Redacted*

*Redacted*

*Redacted*

*Redacted*



DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
07CXT0101DS	US						PERFORMING SISO DETECTION IN A WIMAX ENVIRONMENT
08CXT0005DS	US						Systems and Methods for Performing Initial Synchronization in Wireless Communications Systems
08CXT0007DS	US						Systems and Methods for Monitoring Impulse Noise
08CXT0008DS	US						Cooperative MIMO for Alien Noise Cancellation (CoMAC) for Upstream VDSL Systems
08CXT0021DS	US						Systems and Methods for Characterizing Loops Based on Single-Ended Line Testing (SELT)
08CXT0029DS	US						Metric Computation for Lowering Complexity of MIMO Detection Algorithms
08CXT0031DS	US						SYSTEMS AND METHODS FOR SIGNALING FOR VECTORING OF DSL SYSTEMS
08CXT0032DS	US						SYSTEMS AND METHODS FOR PROTECTING DSL SYSTEMS AGAINST IMPULSE NOISE
08CXT0033DS	US						DSL Loop Topology Recognition Based on the Insertion Loss (Hlog) Measurements
08CXT0034DS	US						Systems and Methods for Selecting Tones for Far-End Crosstalk Mitigation
08CXT0037DS	US						Systems and Methods for Characterizing Loop Termination Via Single-Ended Line Testing
08CXT0038DS	US						S & M for Impulse Noise Characterization
08CXT0045DS	US						Triangle Wave Generation in a 3-Level PWM System
08CXT0050DS	US						Packet Retransmission Method for DSL Systems
08CXT0103DS	US						SYSTEMS AND METHODS FOR RETRANSMISSION WITH ADSL2 USING ATM-TC
09CXT0012DS	US						Customized Floating Point Format for the

*Revised*

NB1:781708

Attachment I - 8

*10/26/98*

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
09CXT0020DS	US						Representation of the Per-dimension Normalized Error in Vecteded DSL Systems
09CXT0021DS	US						Duo-Binary Turbo Coded Modulation Encoder for Multitone Communication Systems
09CXT0023DS	US						Instantaneous Partial Self-FEXT Cancellation and Precoding in VDSL Using Received/Transmit Symbol Energy Information at the CO
09CXT0027DS	US						Off Diagonal Architecture of DSM3 Processor
09CXT0029DS	US						System and Method for Detecting Loss of Signal (LOS) in a VDSL2 Receiver
9CXT0029DS	US						Systems and Methods for Retransmission Return Channel Error Detection
09CXT0029DS	US						Systems and Methods for Retransmission Return Channel Error Detection
09CXT0029DS	US						Systems and Methods for Retransmission Return Channel Error Detection
09CXT0044	US						Systems and Methods for Retransmission Return Channel Error Detection
97RSS112	US	Granted	08/943,484	10/3/1997	6,101,216	8/8/2000	Dual Forward Error Correction Encoder
97RSS112	US	Granted	09/028,210	2/23/1998	6,161,203	12/12/2000	Splitterless Digital Subscriber Line Communication System
97RSS112	US	Granted	09/028,141	2/23/1998	6,263,077	7/17/2001	Splitterless Digital Subscriber Line Communication System
97RSS112	US	Granted	09/028,023	2/23/1998	6,430,219	8/6/2002	Splitterless Digital Subscriber Line Communication System
97RSS112	US	Granted	09/028,016	2/23/1998	6,445,733	9/3/2002	Method of and Apparatus for Performing Line Characterization in a Non-Idle Mode in a Subscriber Line Communication System
97RSS395	US	Granted	08/982,400	12/21/1997	6,212,227	4/3/2001	Constant Envelope Modulation for Splitterless

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
97RSS397	US	Granted	08/982,421	12/2/1997	6,151,335	11/21/2000	ADSL Transmission Modulation Switching for Splitterless DSL Transmission
97RSS397	US	Granted	09/547,424	4/11/2000	7,173,944	2/6/2007	Modulation Switching for Splitterless DSL Transmission
98RSS046	US	Granted	09/165,592	9/30/1998	6,466,584	10/15/2002	System and Method for Performing Digital Subscriber Line (DSL) Modem Communication Over an AC Link Bus
98RSS079	US	Granted	09/162,845	9/29/1998	6,356,585	3/1/2002	Power Cutback in Splitterless ADSL Systems
98RSS332	US	Granted	09/408,639	9/30/1999	6,711,138	3/23/2004	Braveheart - A Home Access Multiplexer With DSL and Phoneline Home Networking
GV112	US	Granted	10/138,700	5/6/2002	7,272,153	9/18/2007	System and Method for Distributed Processing of Packet Data Containing Audio Information
GV112	US	Published	11/844,531	8/4/2007			System and Method for Distributed Processing of Packet Data Containing Audio Information
GV135	US	Granted	10/050,128	1/18/2002	7,113,491	9/26/2006	Varying an Echo Canceller Filter Length Based on Data Rate
GV139	US	Published	10/757,587	1/15/2004			Minimum Processor Instruction for Implementing Weighted Fair Queuing and Other Priority Queuing
GV139	US	Pending / <i>Pv</i>	11/695,838	4/3/2007			Minimum Processor Instruction for Implementing Weighted Fair Queuing and Other Priority Queuing
GV141	US	Granted	10/161,687	6/5/2002	7,013,271	3/14/2006	Low Complexity Spectrum Estimation Technique for Comfort Noise Generation
GV143	US	Published	11/234,121	9/26/2005			Method and System for Generating Colored Comfort Noise in the Absence of Silence Insertion Description Packets
GV194	US	Granted	10/321,509	12/18/2002	6,788,236	9/7/2004	Implementation of Sigma Delta Analog-to-Digital Converter
GV195	US	Granted	10/321,508	12/18/2002	7,076,514	7/11/2006	Computation of Pre-Equalizer Coefficients
GV211	US	Granted	10/340,606	1/13/2003	7,385,995	6/10/2008	System and Method for Dynamic Bandwidth

NBI:781708

Attachment I - 10

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
							Allocation in PONS
GV229	US	Granted	10/250,236	6/16/2003	7,190,731	3/13/2007	System and Method for applying transmit windowing in ADSL+ networks
GV234	US	Allowed	10/626,714	7/25/2003			DBMSOL and FBMSOL Power Spectral Density Masks
GV246	US	Granted	10/263,506	10/4/2002	7,397,860	7/8/2008	Fractional local peak detection & mitigation for PAR reduction
GV247	US	Granted	10/263,732	10/4/2002	7,136,423	11/14/2006	STPI for PAR reduction
GV258	US	Granted	10/393,345	3/21/2003	7,120,211	10/10/2006	Adaptive RFI Canceller for xDSL
GV266	US	Published	10/672,079	9/29/2003			Reducing Interferences due to handshake tones
GV274	US	Granted	10/408,364	4/8/2003	7,212,595	5/1/2007	Reduced Complexity Time-Frequency Equalizer for Discrete Multi-Tone Based DSL Systems
GV275	US	Granted	10/618,678	7/15/2003	7,289,554	10/30/2007	Channel Equalization and Cyclostationary Interference Rejection for ADSL-DMT Modems
GV276	US	Published	10/874,329	6/24/2004			Technique for Improving Multi-Channel Multi-Tone Transmissions
GV277	US	Granted	10/849,569	5/20/2004	7,457,333	11/25/2008	Fourier Transform Side Lobe Mitigation
GV279	US	Granted	10/860,286	6/4/2004	7,457,368	11/25/2008	Multilevel Channel Coding in ADSL
GV281	US	Appealed	11/032,203	1/10/2005			Systems and Methods for Achieving Improved ADSL Data Rates Over USB 1.1 Channel
GV283	US	Published	10/714,660	11/18/2003			Enhanced Smart DSL Systems for LDSL
GV285	US	Granted	10/714,655	11/18/2003	7,406,126	7/29/2008	Implementation of Smart DSL for LDSL Systems
GV295	US	Appealed	10/952,435	9/29/2004			Cancelling Radio Frequency Interferers (RFI) in xDSL Signals
GV302	US	Allowed	10/970,718	10/22/2004			Hierarchical Trellis Coded Modulation
GV307	US	Granted	11/035,422	1/14/2005	7,460,649	12/2/2008	Single End Loop Testing for DSL Provisioning and Maintenance
GV310	US	Granted	10/721,259	11/26/2003	7,372,900	5/13/2008	Selecting an Optimal Asymmetric Digital Subscriber Line Mode
GV312	US	Allowed	10/824,611	4/15/2004			Techniques for Dynamic Bin Allocation

NBI:781708

Attachment I - 11

DOCKET NO.	COUNTRY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
GV315	US	Granted	10/996,054	11/24/2004	7,564,932	7/21/2009	Method and System for Enhancing Bit Rate in DMT Quad Spectrum Systems
GV324	US	Published	11/031,020	1/10/2005			Real-Time Formation of Optimal Power Spectral Density Masks
GV330	US	Granted	10/808,549	3/25/2004	7,400,710	7/15/2008	MIMO Dynamic PSD Allocation for DSL Networks
GV419	US	Granted	11/248,224	10/13/2005	7,555,052	6/30/2009	Method and System for Turbo Trellis Coded Modulation Scheme for Communication Systems
GV420	US	Granted	11/282,109	11/18/2005	7,352,805	4/1/2008	Adaptive VDSL System with Variable Sampling Frequency and Time-Domain Equalizer
GV422	US	Granted	11/197,524	8/5/2005	7,400,693	7/15/2008	System and Method of Echo Cancellation
GV424	US	Granted	11/297,634	12/9/2005	7,408,999	8/5/2008	M&S for Dynamic Interleaver Adaptation Scheme in VDSL
GV424	US	Granted	11/297,632	12/9/2005	7,466,758	12/16/2008	Method and System for Dynamic Interleaver Adaptation Scheme in VDSL
GV425	US	Granted	11/009,710	12/13/2004	7,295,603	11/13/2007	Method and System for Virtual Exchange Reference Impact (VERI) for Use in Mixed Spectrum Management in DSL
S-286	US	Published	11/687,361	3/16/2007			Media Access Control Device for High Efficiency Ethernet Backplane
S-3007	US	Granted	10/750,445	12/31/2003	7,373,425	5/13/2008	High-Speed MAC Address Search Engine
S-3007	US	Published	12/107,567	4/22/2008			High-Speed MAC Address Search Engine
S-3009	US	Published	12/327,919	12/4/2008			Compact Packet Switching Node Storage Architecture Employing Double Data Rate Synchronous Dynamic RAM
S-3009	US	Granted	10/812,141	3/29/2004	7,486,688	2/3/2009	Compact Packet Switching Node Storage Architecture Employing Double Data Rate Synchronous Dynamic RAM
Pillsbury01	US	Granted	09/759,694	1/12/2001	6,622,282	9/16/2003	Trellis Coding with One-Bit Constellations

Attachment I (Continued)

DOCKET NO.	CTY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
21975	US	Abandoned	09/794,737	2/27/2001			QAM
032478004	US	Granted	09/525,452	3/14/2000	6813311	11/2/2004	Non-linear echo cancellation for wireless modems and the like
032478006	US	Granted	09/552,010	4/19/2000	6643676	11/4/2003	Initialization/prewindowing removal postprocessing for fast RLS filter
032478007	US	Granted	09/639,714	8/14/2000	6769090	7/27/2004	Unified technique for multi-rate trellis coding and decoding
032478008	US	Abandoned 3/17/08	09/770,829	1/26/2001	6693975	2/17/2004	Low-order HDSL2 transmit filter
607041040	US	Granted	08/586,008	12/29/1995	5703904	12/30/1997	Impulse noise effect reduction
607041060	US	Granted	08/579,713	12/28/1995	5732112	3/24/1998	Channel training of multi-channel receiver system
607041140	US	Granted	08/469,558	6/6/1995	5898710	4/27/1999	Implied interleaving, a family of systematic interleavers and deinterleavers
607041140	US	Granted	09/058,346	4/10/1998	5968200	10/19/1999	Implied interleaving, a family of systematic interleavers and deinterleavers
607041420	US	Expired	08/874,863	6/13/1997	5963112	10/5/1999	Cascaded Higher Order Filter With Low Sensitivity to Component Values and a Method for Designing the Same
607041470	US	Abandoned	09/835,436	4/16/2001			Combined Handset and POTS Filter
607041580	US	Granted	09/311,969	5/14/1999	6549925	4/15/2003	Circuit for computing a fast fourier transform
607041640	US	Granted	09/174,026	10/16/1998	6310896	10/30/2001	System and method for data sequence correlation in the time domain
607041810	US	Granted	09/309,462	5/11/1999	6353909	3/5/2002	Configurable encoder and method for generating a Reed-Solomon codeword
607041870	US	Abandoned 7/11/05	10/222,348	8/15/2002			System and method for communicating in a point-to-multipoint DSL network
607041950	US	Granted	09/311,964	5/14/1999	6490672	12/3/2002	Method for computing a fast fourier transform and associated circuit for addressing a data memory

DOCKET NO.	CTY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
607041950	US	Abandoned 7/2/03	10/198,896	7/18/2002			Method for computing a fast fourier transform and associated circuit for addressing a data memory
607041950	US	Granted	10/126,602	6/5/2002	6629117	9/30/2003	Method for computing a fast fourier transform and associated circuit for addressing a data memory
607051010	US	Expired	09/358,192	7/21/1999	6678721	1/13/2004	System and Method for Establishing a Point-to-Multipoint DSL Network (Dynamic Master/Slave Configuration)
607051020	US	Granted	10/247,144	9/19/2002	6615227	9/2/2003	Circuit and method for computing a fast fourier transform
607051020	US	Granted	09/398,636	9/17/1999	6477554	11/5/2002	Circuit and method for computing a fast fourier transform
607052010	US	Abandoned 3/27/07	10/316,155	12/10/2002			System and method for reducing noise induced by digital subscriber line (DSL) systems into services that are concurrently deployed on a communication line
607052010	US	Abandoned 10/16/07	10/316,081	12/10/2002			System and method for improving data transmission
05CXT0157DL	US	Published	11/617,028	12/28/2006			Subframe Interleaving
05CXT0157DL	US	Published	11/615,535	12/22/2006			Self-Protection Against Non-Stationary Disturbances
06CXT0018DS	US	Published	11/840,547	8/17/2007			Systems and Methods for Implementing a Double Precision Arithmetic Memory Architecture
607051010	US	Abandoned 2/11/08	09/358,192	7/21/1999	6678721	1/13/2004	System and method for establishing a point-to-multipoint DSL network
GV104	US	Granted	10/063,384	4/17/2002	7,203,198	4/10/2007	System and method for scheduling transmission of asynchronous transfer mode cells
GV105	US	Abandoned	Appl. No. 10/063,385; Publ. No. 20020150047	4/17/2002			System and method for scheduling transmission of asynchronous transfer mode cells
GV106	US	Abandoned	10/254,970	9/26/2002			Voice/Tone Discriminator
GV117	US	Abandoned	Appl. No. 10/064,337; Publ. No. 20030212830	07/02/2002			Communications system using rings architecture

DOCKET NO.	CTY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
GV118	US	Abandoned	Appl. No. 10/064,338; Publ. No. 20030196076	07/02/2002			Communications system using rings architecture
GV121	US	Abandoned	10/020,214	12/18/2001			Method and System for Shortening Channel Impulse Response Using Time Domain Equalization Filter
GV134	US	Abandoned 11/24/06	10/063,468	4/25/2002			System and method for routing across segments of a network switch
GV135	US	Abandoned 4/5/06	10/050,533	1/18/2002			Method and system for estimating a base-2 logarithm of a number
GV135	US	Abandoned	10/050,129	1/18/2002			Method to Determine Best G.SHDSL Data Rate Using Sub-band Capacity
GV135	US	Abandoned	10/050,532	1/18/2002			Shaping Transmitted Power Spectral Density According to Line Conditions
GV135	US	Abandoned	10/050,529	1/18/2002			Method and System for determining maximum power backoff using frequency domain geometric signal to noise ratio
GV142	US	Abandoned	10/161,621	6/5/2002			A Simple Gaussian White Noise Generator for Real Time Speech Synthesis Applications
GV144	US	Abandoned	10/161,618	6/5/2002			Method of Determining Filter Gain and Automatic Gain Control for Fixed Point Low Delay Algorithms in Real Time Systems
GV148	US	Abandoned	10/064,709	8/8/2002			Symmetrical Telephony System and Method
GV150	US	Abandoned	09/683,922	3/1/2002			A Method of Connecting a PPP Client to a PPPoE Access Concentrator Via a Bridge
GV156	US	Abandoned	10/020,172	12/18/2001			Method and System for Implementing a Reduced Complexity Dual Rate Echo Canceller
GV157	US	Abandoned	10/020,134	12/18/2001			Reduced Complexity Dual Echo Canceller
GV158	US	Abandoned	10/020,218	12/18/2001			Method and System for Adaptively Training Time Domain Equalizers
GV159	US	Abandoned	10/020,135	12/18/2001			Method and System for Implementing Weighted Vector Error Echo Cancellers

NBI:781708



DOCKET NO.	CTY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
GV163	US	Abandoned	10/065,347	10/7/2002			Method for Partial Support of MIB Tables
GV167	US	Abandoned	Appl. No. 10/064,330; U.S. Publ. No. 20030195989	07/02/2002			Communications system using rings architecture
GV169	US	Abandoned	Appl. No. 10/064,332; U.S. Publ. No. 20030191862	07/02/2002			Communications system using rings architecture
GV170	US	Abandoned	Appl. No. 10/064,333; U.S. Publ. No. 20030200342	07/02/2002			Communications system using rings architecture
GV171	US	Abandoned	Appl. No. 10/064,334; U.S. Publ. No. 20030189940	07/02/2002			Communications system using rings architecture
GV172	US	Abandoned	Appl. No. 10/064,335; U.S. Publ. No. 20030195990	07/02/2002			Communications system using rings architecture
GV182	US	Abandoned	10/321,601	12/18/2002			Spectrally Compliant and Transparent Method for Rate Enhanced SHDSL
GV190	US	Abandoned	10/065,393	10/11/2002			A Method for Intelligent PPPoE Initialization for Embedded CPE
GV203	US	Abandoned	10/340,635	1/13/2003			Integrated PON Processor
GV204	US	Granted	10/614,338	7/8/2003	7474670	1/6/2009	Method and system for allocating bandwidth
GV208	US	Abandoned	Appl. No. 10/064,342; U.S. Publ. No. 20030200343	07/02/2002			Communications system using rings architecture
GV214	US	Abandoned	10/642,336	8/18/2003			Timing Ring Mechanism
GV220	US	Abandoned	10/614,220	7/8/2003			A Method for the Generation of Pseudo Random Numbers

NB1:781708

DOCKET NO.	CTY	STATUS	APP. NO.	FILING DATE	PATENT NO.	ISSUE DATE	TITLE
GV228	US	Granted	10/614,214	7/8/2003	6854025		DMA scheduling mechanism
GV243	US	Abandoned 1/18/07	10/237,982	9/10/2002			Framework for channelized voice using SDSL
GV244	US	Abandoned 6/5/06	10/237,983	9/10/2002			Requirements for dynamic rate repartitioning
GV245	US	Abandoned 7/6/06	10/237,984	9/10/2002			Recommendation for a 1-bit Z channel for DRR
GV255	US	Abandoned 6/23/08	10/336,922	1/6/2003	6741196	5/25/2004	Method and apparatus for a high-drive current digital-to-analog converter
GV255	US	Expired	10/336,922	1/6/2003	6741196	5/25/2004	Method and Apparatus for a High Drive Current Digital-to-Analog Converter
GV257	US	Abandoned	10/377,514	3/3/2003			Zero Installation PPP-Bridge Setup for LAN-to-WAN Connectivity
GV280	US	Published	12/042,930	3/5/2008			ATM Header Compression Using Hash Tables
GV280	US	Granted	10/702,456	11/7/2003	7,400,627	7/15/2008	ATM Header Compression Using Hash Tables
GV411	US	Abandoned	11/320,918	12/30/2005			Time-domain equalizer for discrete multi-tone based DSL systems with cyclic extension in training

NBI:781708

Attachment I - 17

PATENT

REEL: 026363 FRAME: 0435

RECORDED: 05/31/2011