PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT3390362

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
IKANOS COMMUNICATIONS, INC.	06/02/2015

RECEIVING PARTY DATA

Name:	SILICON VALLEY BANK
Street Address:	2400 HANOVER STREET
City:	PALO ALTO
State/Country:	CALIFORNIA
Postal Code:	94304

PROPERTY NUMBERS Total: 373

Property Type	Number
Application Number:	13403956
Application Number:	13483016
Application Number:	13552554
Application Number:	14069831
Application Number:	12932157
Application Number:	61949447
Application Number:	61954838
Application Number:	61971389
Application Number:	61971401
Application Number:	61987880
Application Number:	14662358
Application Number:	62000872
Application Number:	62000892
Application Number:	62015149
Application Number:	62015179
Application Number:	62028723
Application Number:	62032351
Application Number:	14511655
Application Number:	14515894
Application Number:	14532651

Property Type	Number
Application Number:	62044729
Application Number:	62083411
Application Number:	62089632
Application Number:	14634323
Application Number:	62097969
Application Number:	62098018
Application Number:	14629115
Application Number:	14642029
Application Number:	14661177
Application Number:	14671391
Application Number:	14671516
Application Number:	10649112
Application Number:	12573742
Application Number:	12164488
Application Number:	13458865
Application Number:	13967650
Application Number:	14242335
Application Number:	14056767
Application Number:	14054552
Application Number:	14058112
Application Number:	14054006
Application Number:	14065888
Application Number:	14072064
Application Number:	14467709
Application Number:	14339862
Application Number:	14341538
Application Number:	14341576
Application Number:	14466216
Application Number:	14508168
Patent Number:	7596621
Patent Number:	9042211
Patent Number:	9036730
Patent Number:	9042498
Patent Number:	7489693
Patent Number:	6345072
Patent Number:	6904083
Patent Number:	6771697
Patent Number:	8457219

Property Type	Number
Patent Number:	8032800
Patent Number:	7653139
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Patent Number:	7974181
Patent Number:	8947282
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Patent Number:	8885736
Patent Number:	8112687
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Patent Number:	8687770

Property Type	Number
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Patent Number:	8775849
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Patent Number:	8989239
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Patent Number:	7133419
Patent Number:	6829251

Property Type	Number
Patent Number:	7436849
Patent Number:	7061987
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Patent Number:	8897347
Patent Number:	8015303
Patent Number:	7814218
Patent Number:	8151278
Patent Number:	7539760
Patent Number:	7802001

CORRESPONDENCE DATA

Fax Number: (214)981-3400

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 214-981-3483
Email: dclark@sidley.com
Correspondent Name: DUSAN CLARK, ESQ.
Address Line 1:   SIDLEY AUSTIN LLP
Address Line 2:   SUITE 3600
Address Line 4:   DALLAS, TEXAS 75201

ATTORNEY DOCKET NUMBER:	51285-30590
NAME OF SUBMITTER:	DUSAN CLARK
SIGNATURE:	/Dusan Clark/
DATE SIGNED:	06/10/2015

Total Attachments: 26
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INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement, dated as of June 2, 2015, is made by Ikanos Communications, Inc. ("**Grantor**") in favor of Silicon Valley Bank ("**SVB**") pursuant to the First Amended and Restated Loan and Security Agreement, dated as of October 7, 2014 (as amended, amended and restated, supplemented, restructured or otherwise modified, renewed or replaced from time to time, the "***Loan and Security Agreement***"), between Grantor and SVB.

RECITALS

A.   SVB has agreed to make certain advances of money and to extend certain financial accommodation to Grantor (the "**Loans**") in the amounts and manner set forth in the Loan and Security Agreement. SVB is willing to make the Loans to Grantor, but only upon the condition, among others, that Grantor shall grant to SVB a security interest in certain Copyrights, Trademarks and Patents to secure the Obligations (as defined in the Loan and Security Agreement). Capitalized terms used but not otherwise defined herein shall have the meanings given to them in the Loan and Security Agreement.

B.   Pursuant to the terms of the Loan and Security Agreement, Grantor has granted to SVB a security interest in all of Grantor's right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of the Obligations (as defined in the Loan and Security Agreement), Grantor hereby represents, warrants, covenants and agrees as follows:

AGREEMENT

To secure the Obligations (as defined in the Loan and Security Agreement), Grantor grants and pledges to SVB a security interest in all of Grantor's right, title and interest in, to and under its Intellectual Property (including without limitation those Copyrights, Patents and Trademarks listed on Schedules A, B and C hereto), and including without limitation all proceeds thereof (such as, by way of example but not by way of limitation, license royalties and proceeds of infringement suits), the right to sue for past, present and future infringements, all rights corresponding thereto throughout the world and all re-issues, divisions, continuations, renewals, extensions and continuations-in-part thereof.

This security interest is granted in conjunction with the security interest granted to SVB under the Loan and Security Agreement. The rights and remedies of SVB with respect to the security interest granted hereby are in addition to those set forth in the Loan and Security Agreement and the other Loan Documents, and those which are now or hereafter available to SVB as a matter of law or equity. Each right, power and remedy of SVB provided for herein or in the Loan and Security Agreement or any of the other Loan Documents, or now or hereafter existing at law or in equity shall be cumulative and concurrent and shall be in addition to every right, power or remedy provided for herein and the exercise by SVB of any one or more of the rights, powers or remedies provided for in this Intellectual Property Security Agreement, the Loan and Security Agreement or any of the other Loan Documents, or now or hereafter existing

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at law or in equity, and shall not preclude the simultaneous or later exercise by any person, including SVB, of any or all other rights, powers or remedies.

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

Ikanos Communications, Inc.

By: _____

Name: ___Dennis Bencala_____

Title: ___Chief Financial Officer_____

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.
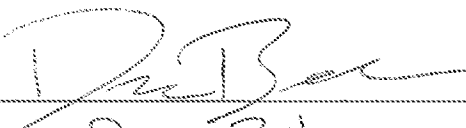
Silicon Valley Bank:

By: _____

Name: _Drew Beito_____

Title: _Vice President_____

PATENT
REEL: 035874 FRAME: 0366

<u>EXHIBIT A</u>

Copyrights

None

EXHIBIT B

Patents

NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE:	STATUS
1.	10/649364	8/26/2003	7596621	9/29/2009	SYSTEM AND METHOD FOR MANAGING SHARED STATE USING MULTIPLE PROGRAMMED PROCESSORS	Issued
2.	12/969332	12/15/2010	9042211	5/26/2015	SYSTEMS AND METHODS OF RESOURCE ALLOCATION FOR CANCELLATION OF CROSSTALK	Issued
3.	13/346638	1/9/2012	9036730	5/19/2015	METHOD AND APPARATUS FOR PEAK-TO-AVERAGE RATIO REDUCTION	Issued
4.	20130051488 13/403956	2/28/2013 2/23/2012			SYSTEM AND METHOD FOR PARTITIONING DSL VECTOR CANCELLATION	Application allowed
5.	20120236874 13/483016	9/20/2012 5/29/2012			METHOD AND APPARATUS FOR DATA TRANSMISSION IN HOME NETWORKS	Application allowed
6.	20140023127 13/552554	1/23/2014 7/18/2012			SYSTEM AND METHOD FOR SELECTING PARAMETERS FOR COMPRESSING COEFFICIENTS FOR NODESCALE VECTORING	Application allowed
7.	14/058129	10/18/2013	9042498	5/26/2015	DM-CM DIVERSITY RECEIVER FOR A WIRELINE COMMUNICATION SYSTEM	Issued
8.	20140126705 14/069831	5/8/2014 11/1/2013			CUSTOMER PREMISE SELT BASED METHOD FOR DETECTING THE PRESENCE OF A MICRO-FILTER ON A VDSL CONNECTION	Application allowed
9.	12/932157	2/17/2011			METHOD AND APPARATUS FOR LINK VALIDATION	Pending
10.	61/949447	3/7/2014			MULTI-SYMBOL RATE VECTORING	Pending
11.	61/954838	3/18/2014			TRANSMIT CONTROLLED ADAPTIVE MODULATION FOR XDSL AND G.FAST	Pending
12.	61/971389	3/27/2014			A METHOD TO IMPROVE THE LINEARITY OF THE TIME DOMAIN TRACE DERIVED FROM A SINGLE ENDED LINE TEST	Pending
13.	61/971401	3/27/2014			METHOD OF OPTIMIZING AN XDSL TRANSCEIVER ANALOG CONFIGURATION THROUGH USE OF A CUSTOMER PREMISE BASED SINGLE ENDED LINE TEST (SELT) MEASUREMENT	Pending
14.	61/987880	5/2/2014			METHOD AND APPARATUS FOR DETECTING MISSING MICROFILTER	Pending
15.	14/662358	3/19/2015			METHODS AND SYSTEMS FOR MAINTAINING SPECTRAL COMPATIBILITY BETWEEN CO-EXISTING LEGACY AND WIDEBAND DSL SERVICES	Pending
16.	62/000872	5/20/2014			FEXT COEFFICIENT UPDATE FOR G.FAST VECTORING WITH DISCONTINUOUS OPERATION	Pending

NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE:	STATUS
17.	62/000892	5/20/2014			EFFICIENT MANAGEMENT OF FEXT COEFFICIENT MEMORY FOR G.FAST VECTORING	Pending
18.	62/015149	6/20/2014			DUAL BAND ANALOG FRONT END FOR HIGH SPEED DATA TRANSMISSION	Pending
19.	62/015179	6/20/2014			A SUB BAND APPROACH TOWARDS DOUBLING THE TRANSMISSION BANDWIDTH FOR DMT SYSTEMS	Pending
20.	62/028723	7/24/2014			METHOD AND APPARATUS FOR GAUGE IDENTIFICATION BASED ON SINGLE ENDED LINE TESTING (SELT)	Pending
21.	62/032351	8/1/2014			TIME SPACE CROSSTALK MANAGEMENT	Pending
22.	20150104001 14/511655	4/16/2015 10/10/2014			METHOD AND APPARATUS FOR VECTORING ADSL2 LINES	Published
23.	20150109970 14/515894	4/23/2015 10/16/2014			METHOD AND APPARATUS FOR MANAGING PROCESSING IN TDD FRAMES TO ENABLE POWER DISSIPATION REDUCTION	Published
24.	20150124948 14/532651	5/7/2015 11/4/2014			METHOD AND APPARATUS FOR MANAGING LOW POWER MODE IN XDSL SYSTEMS	Published
25.	62/044729	9/2/2014			DUAL-SOURCE HYBRID CANCELLATION SCHEME	Pending
26.	62/083411	11/24/2014			SYSTEM AND METHOD FOR REDUCED PRECISION VECTOR PROCESSING	Pending
27.	62/089632	12/9/2014			ORDERED QR FACTORIZATION FOR NONLINEAR PRECODER	Pending
28.	14/634323	2/27/2015			METHOD AND APPARATUS FOR CACHING IN A NETWORKED ENVIRONMENT	Pending
29.	62/097969	12/30/2014			SYSTEM AND METHOD FOR PREVENTING PHANTOM DATA COMMUNICATION LINKS	Pending
30.	62/098018	12/30/2014			ENHANCEMENT OF SELT TDR SIGNAL FOR DISPLAY ON TECHNICIAN HANDHELD UNIT	Pending
31.	14/629115	2/23/2015			METHODS AND APPARATUSES FOR CHARACTERIZING COMMON MODE NOISE AND ESTIMATING LOOP IMBALANCE	Pending
32.	14/642029	3/9/2015			METHOD AND APPARATUS FOR PERFORMING MULTI-SYMBOL RATE VECTORING	Pending
33.	14/661177	3/18/2015			METHOD AND APPARATUS FOR IMPROVING PERFORMANCE OF TRANSMIT CONTROLLED ADAPTIVE MODULATION IN XDSL AND G.FAST SYSTEMS	Pending
34.	14/671391	3/27/2015			METHOD TO IMPROVE THE LINEARITY OF THE TIME DOMAIN TRACE DERIVED FROM A SINGLE ENDED LINE TEST	Pending
35.	14/671516	3/27/2015			METHOD OF OPTIMIZING AN XDSL TRANSCEIVER ANALOG	Pending

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NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE	STATUS
					CONFIGURATION THROUGH USE OF A CUSTOMER PREMISE BASED SINGLE ENDED LINE TEST (SELT) MEASUREMENT	
36.	10/649112	8/26/2003			SYSTEM AND METHOD FOR MAINTAINING COHERENCY AMONG MULTIPLE PROCESSORS	Pending
37.	20100088569 12/573742	4/8/2010 10/5/2009			METHOD AND APPARATUS FOR PACKET RETRANSMISSION IN DSL SYSTEMS	Published
38.	20090323902 12/164488	12/31/2009 6/30/2008			SYSTEMS AND METHODS FOR CHARACTERIZING LOOPS BASED ON SINGLE-ENDED LINE TESTING (SELT)	Published
39.	20120275591 13/458865	11/1/2012 4/27/2012			SYSTEMS AND METHODS FOR G.VECTOR INITIALIZATION	Published
40.	20140050273 13/967650	2/20/2014 8/15/2013			ROBUST HANDSHAKE PROCEDURE IN CROSS-TALK ENVIRONMENTS	Published
41.	20140211936 14/242335	7/31/2014 4/1/2014			REDUCED MEMORY VECTORED DSL	Published
42.	20140177694 14/056767	6/26/2014 10/17/2013			METHOD AND APPARATUS FOR SENSING NOISE SIGNALS IN A WIRELINE COMMUNICATIONS ENVIRONMENT	Published
43.	20140105262 14/054552	4/17/2014 10/15/2013			METHOD AND APPARATUS FOR DETECTING AND ANALYZING NOISE AND OTHER EVENTS AFFECTING A COMMUNICATION SYSTEM	Published
44.	20140112379 14/058112	4/24/2014 10/18/2013			METHOD AND APPARATUS FOR CANCELLING IMPULSE NOISE IN DSL SYSTEMS	Published
45.	20140105000 14/054006	4/17/2014 10/15/2013			METHOD AND APPARATUS TO DETECT INFORMATION REGARDING STATE OF COMMUNICATION LINK	Published
46.	20140119250 14/065888	5/1/2014 10/29/2013			MECHANISM TO FACILITATE TIMING RECOVERY IN TIME DIVISION DUPLEX SYSTEMS	Published
47.	20140056396 14/072064	2/27/2014 11/5/2013			SYSTEMS AND METHODS FOR IMPLEMENTING A MULTI-SENSOR RECEIVER IN A DSM3 ENVIRONMENT	Published
48.	20140362985 14/467709	12/11/2014 08/25/2014			UPBO FOR VECTORED DSL	Published
49.	20150030137 14/339862	1/29/2015 7/24/2014			METHOD AND APPARATUS FOR DESIGNING AN IMPROVED TRANSMIT SIGNAL FOR USE IN A SINGLE ENDED LINE TEST (SELT)	Published
50.	20150030138 14/341538	1/29/2015 7/25/2014			METHOD AND APPARATUS FOR DETECTING AND LOCATING LOOP IMPAIRMENTS	Published
51.	20150030059 14/341576	1/29/2015 7/25/2014			METHOD AND APPARATUS FOR DETECTING IMPROPER CONNECTIONS NEAR A CUSTOMER PREMISES EQUIPMENT	Published
52.	20150055692 14/466216	2/26/2015 8/22/2014			METHOD AND APPARATUS FOR INITIATING AND DATA COLLECTION OF SINGLE ENDED LINE TEST ON	Published

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NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE:	STATUS
					CUSTOMER PREMISE EQUIPMENT	
53.	20150023494 14/508168	1/22/2015 10/7/2014			VECTORED DSL CROSSTALK CANCELLATION	Published
54.	10/245982	9/18/2002	7489693	2/10/2009	METHODS AND APPARATUS FOR AUTOMATICALLY DETECTING VIRTUAL CIRCUIT SETTINGS AND ENCAPSULATION TYPES IN A DSL NETWORK	Registered
55.	09/255235	2/22/1999	6345072	2/5/2002	UNIVERSAL DSL LINK INTERFACE BETWEEN A DSL DIGITAL CONTROLLER AND A DSL CODEC	Registered
56.	10/054327	11/13/2001	6904083	6/7/2005	DSL LINK WITH EMBEDDED CONTROL AND MULTI-CHANNEL CAPABILITY	Registered
57.	09/701810	6/18/1999	6771697	8/3/2004	SPREAD SPECTRUM HANDSHAKE FOR DIGITAL SUBSCRIBER LINE TELECOMMUNICATIONS SYSTEMS	Registered
58.	11/615535	12/22/2006	8457219	6/4/2013	SELF-PROTECTION AGAINST NON-STATIONARY DISTURBANCES	Registered
59.	11/617028	12/28/2006	8032800	10/4/2011	SUBFRAME INTERLEAVING	Registered
60.	11/315372	12/23/2005	7653139	1/26/2010	BIT-LOADING METHOD AND SYSTEM FOR A DMT TRANSCEIVER	Registered
61.	09/263160	3/5/1999	6570912	5/27/2003	HYBRID SOFTWARE/HARDWARE DISCRETE MULTI-TONE TRANSCEIVER	Registered
62.	09/893383	6/27/2001	6567465	5/20/2003	DSL MODEM UTILIZING LOW DENSITY PARITY CHECK CODES	Registered
63.	12/411511	3/26/2009	8555149	10/8/2013	SYSTEMS AND METHODS FOR PROTECTING DSL SYSTEMS AGAINST IMPULSE NOISE	Registered
64.	12/431878	4/29/2009	8204211	6/19/2012	SYSTEMS AND METHODS FOR SELECTING TONES FOR FAR-END CROSSTALK MITIGATION	Registered
65.	12/325541	12/1/2008	8300771	10/30/2012	SYSTEMS AND METHODS FOR CHARACTERIZING LOOP TERMINATION VIA SINGLE-ENDED LINE TESTING	Registered
66.	10/054410	11/13/2001	6836510	12/28/2004	DSL LINK WITH SCALEABLE PERFORMANCE	Registered
67.	11/686420	3/15/2007	8031759	10/4/2011	CONFIGURING TRANSMISSION SIGNALS	Registered
68.	12/348565	1/5/2009	8396688	3/12/2013	SYSTEMS AND METHODS FOR IMPULSE NOISE CHARACTERIZATION	Registered
69.	11/712125	2/28/2007	7660260	2/9/2010	DOWNSTREAM POWER BACK-OFF FOR FIBER-TO-NODE APPLICATIONS	Registered
70.	11/845040	8/25/2007	7957477	6/7/2011	SYSTEMS AND METHODS FOR MIMO PRECODING IN AN XDSL SYSTEM	Registered
71.	13/091651	4/21/2011	8194767	6/5/2012	SYSTEMS AND METHODS FOR MIMO PRECODING IN AN XDSL SYSTEM	Registered
72.	12/728758	3/22/2010	8677226	3/18/2014	SYSTEMS AND METHODS FOR RETRANSMISSION RETURN CHANNEL ERROR DETECTION	Registered
73.	11/940268	11/14/2007	7835405	11/16/2010	MULTIPLEXING/DEMULTIPLEXING ON A SHARED INTERFACE	Registered
74.	12/044489	3/7/2008	8515016	8/20/2013	SYSTEMS AND METHODS FOR BRIDGE	Registered

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NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE:	STATUS
					TAP DETECTION BASED ON PER-PORT CALIBRATION	
75.	12/557584	9/11/2009	8344761	1/1/2013	3-LEVEL LINE DRIVER	Registered
76.	12/044443	3/7/2008	8509389	8/13/2013	SYSTEMS AND METHODS FOR LOOP LENGTH ESTIMATION BASED ON PER-PORT CALIBRATION	Registered
77.	12/044531	3/7/2008	8515017	8/20/2013	SYSTEMS AND METHODS FOR LOOP TERMINATION DETECTION BASED ON PER-PORT CALIBRATION	Registered
78.	12/114169	5/2/2008	8369426	2/5/2013	REDUCING THE EFFECT OF NOISE IN A MULTI-CHANNEL TELECOMMUNICATION RECEIVER	Registered
79.	12/924764	10/4/2010	8797872	8/5/2014	METHOD AND APPARATUS FOR REDUCING SWITCHOVER LATENCY IN IPTV SYSTEMS	Registered
80.	12/138692	6/13/2008	8295444	10/23/2012	SYSTEMS AND METHODS FOR PERFORMING LOOP ANALYSIS BASED ON UN-CALIBRATED SINGLE-ENDED LINE TESTING	Registered
81.	12/645753	12/23/2009	8463955	6/11/2013	TRANSPORT FRAME STRUCTURE FOR RETRANSMISSION IN DSL	Registered
82.	12/807524	9/8/2010	8767521	7/1/2014	METHOD AND APPARATUS FOR CROSSTALK CANCELLATION DURING SELT TESTING	Registered
83.	12/713482	2/26/2010	8644127	2/4/2014	SYSTEMS AND METHODS FOR MITIGATING SELF-INDUCED FAR-END CROSSTALK	Registered
84.	12/799607	4/27/2010	8325825	12/4/2012	METHOD AND APPARATUS FOR OPTIMIZING DYNAMIC RANGE IN DMT MODEMS	Registered
85.	12/857775	8/17/2010	8619969	12/31/2013	ADAPTIVE INTEGRATED HYBRID WITH COMPLEX ADAPTATION FOR DIGITAL SUBSCRIBER LINE SYSTEMS	Registered
86.	12/100355	4/9/2008	7925935	4/12/2011	BACK CHANNEL COMMUNICATION	Registered
87.	13/046991	3/14/2011	8418004	4/9/2013	BACK CHANNEL COMMUNICATION	Registered
88.	12/109566	4/25/2008	8351598	1/8/2013	CROSSTALK RECOGNITION IN PRESENCE OF RADIO FREQUENCY INTERFERENCE	Registered
89.	12/138731	6/13/2008	7974181	7/5/2011	SYSTEMS AND METHODS FOR TRANSMIT-ONLY PEAK-TO-AVERAGE RATIO REDUCTION IN THE OVERSAMPLED REGIME USING RESERVED TONES	Registered
90.	12/931018	1/20/2011	8947282	2/3/2015	METHOD AND APPARATUS FOR A CURRENT CONTROL	Registered
91.	13/051906	3/18/2011	8576690	11/5/2013	SYSTEMS AND METHODS FOR IMPLEMENTING A MULTI-SENSOR RECEIVER IN A DSM3 ENVIRONMENT	Registered
92.	13/081962	4/7/2011	8767812	7/1/2014	SYSTEMS AND METHODS FOR FREQUENCY DOMAIN REALIZATION OF NON-INTEGER FRACTIONALLY SPACED TIME DOMAIN EQUALIZATION	Registered

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NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE	STATUS
93.	12/138657	6/13/2008	8885736	11/11/2014	SYSTEMS AND METHODS FOR POSITIONING AND MESSAGING OF RESERVED TONES FOR PEAK-TO-AVERAGE RATIO (PAR) REDUCTION IN DSL SYSTEMS	Registered
94.	12/348763	1/5/2009	8112687	2/7/2012	SYSTEMS AND METHODS FOR MITIGATING IMPULSE NOISE	Registered
95.	13/173672	6/30/2011	8261149	9/4/2012	CONFIGURABLE IMPULSE NOISE PROTECTION SYSTEM AND METHOD BASED ON IMPULSE NOISE STATISTICS	Registered
96.	13/095421	4/27/2011	8687770	4/1/2014	SYSTEMS AND METHODS FOR PERFORMING LINE IMBALANCE MEASUREMENT AND MITIGATION BASED ON A COMMON MODE SENSOR	Registered
97.	12/138813	6/13/2008	8213536	7/3/2012	LOW COMPLEXITY SYSTEMS AND METHODS FOR PEAK-TO-AVERAGE RATIO (PAR) REDUCTION USING RESERVED TONES	Registered
98.	12/139146	6/13/2008	8275067	9/25/2012	ADAPTIVE TURBO PEAK MITIGATION FOR PEAK-TO-AVERAGE RATIO (PAR) REDUCTION USING RESERVED TONES	Registered
99.	13/103072	5/8/2011	8775849	7/8/2014	SYSTEMS AND METHODS FOR TRANSPORTING TIME-OF-DAY INFORMATION IN A COMMUNICATION SYSTEM	Registered
100.	12/036035	2/22/2008	7953143	5/31/2011	SYSTEMS AND METHODS FOR DERIVING PARAMETERS FOR IMPULSE NOISE DETECTORS	Registered
101.	13/103063	5/7/2011	8989239	3/24/2015	SYSTEMS AND METHODS FOR RETRANSMISSION WITH ON-LINE RECONFIGURATION	Registered
102.	12/123925	5/20/2008	7835368	11/16/2010	SYSTEMS AND METHODS FOR MITIGATING THE EFFECTS OF UPSTREAM FAR-END CROSS TALK	Registered
103.	13/189095	7/22/2011	8780686	7/15/2014	REDUCED MEMORY VECTORED DSL	Registered
104.	13/102623	5/6/2011	8755394	6/17/2014	GATEWAY DEVICE FOR PERFORMING COMMUNICATION WITH VARIOUS DEVICES IN HOME NETWORKS AND WIDE AREA NETWORKS	Registered
105.	13/189666	7/25/2011	8817857	8/26/2014	UPBO FOR VECTORED DSL	Registered
106.	12/351071	1/9/2009	8290033	10/16/2012	SYSTEMS AND METHODS FOR PERFORMING COMBINED EQUALIZATION IN COMMUNICATION SYSTEMS	Registered
107.	10/626714	7/25/2003	7633999	12/15/2009	DBMsOL AND FBMsOL POWER SPECTRAL DENSITY MASKS	Registered
108.	12/620832	11/18/2009	8413000	4/2/2013	RETRANSMISSION ABOVE THE GAMMA INTERFACE	Registered
109.	12/168480	7/7/2008	8102946	1/24/2012	SYSTEMS AND METHODS FOR PERFORMING SISO DETECTION IN A WIMAX ENVIRONMENT	Registered
110.	12/250012	10/13/2008	8446894	5/21/2013	SYSTEMS AND METHODS FOR PERFORMING INITIAL	Registered

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					SYNCHRONIZATION IN WIRELESS COMMUNICATIONS SYSTEMS	
111.	12/098696	4/7/2008	7978756	7/12/2011	SYSTEMS AND METHODS FOR MONITORING IMPULSE NOISE	Registered
112.	12/100253	4/9/2008	8300803	10/30/2012	COOPERATIVE MIMO FOR ALIEN NOISE CANCELLATION (COMAC) FOR UPSTREAM VDSL SYSTEMS	Registered
113.	12/251862	10/15/2008	8391378	3/5/2013	METRIC COMPUTATION FOR LOWERING COMPLEXITY OF MIMO DETECTION ALGORITHMS	Registered
114.	12/412191	3/26/2009	8817907	8/26/2014	SYSTEMS AND METHODS FOR SIGNALING FOR VECTORING OF DSL SYSTEMS	Registered
115.	09/281903	3/31/1999	6542477	4/1/2003	DIGITALLY-TUNABLE ECHO-CANCELLING ANALOG FRONT END FOR WIRELINE COMMUNICATIONS DEVICES	Registered
116.	13/273916	10/14/2011	8848504	9/30/2014	DSL ALIEN NOISE REDUCTION	Registered
117.	09/164552	10/1/1998	6421377	7/16/2002	SYSTEM AND METHOD FOR ECHO CANCELLATION OVER ASYMMETRIC SPECTRA	Registered
118.	09/174026	10/16/1998	6310896	10/30/2001	SYSTEM AND METHOD FOR DATA SEQUENCE CORRELATION IN THE TIME DOMAIN	Registered
119.	09/815509	3/23/2001	6658499	12/2/2003	JOINT NEGOTIATION OF ADSL AND USB BANDWIDTH FOR AN ADSL USB MODEM	Registered
120.	09/819325	3/28/2001	6909781	6/21/2005	DSL LINE TESTER	Registered
121.	09/862952	5/22/2001	7010025	3/7/2006	CIRCUIT AND METHOD FOR AN IMPROVED FRONT END IN DUPLEX SIGNAL COMMUNICATION SYSTEM	Registered
122.	09/808760	3/15/2001	6999504	2/14/2005	SYSTEM AND METHOD FOR CANCELING CROSSTALK	Registered
123.	09/888735	6/25/2001	7031378	4/18/2006	UNIFIED DSL TRANSCEIVER	Registered
124.	09/939439	8/24/2001	7068780	6/27/2006	HYBRID ECHO CANCELLER	Registered
125.	09/971484	10/5/2001	6894580	5/17/2005	FILTER TUNER SYSTEM AND METHOD (09/971,484)	Registered
126.	09/975446	10/11/2001	6922444	7/26/2005	SYSTEM AND METHOD FOR PROVIDING ADAPTIVE RATE SELECTION	Registered
127.	10/014315	12/11/2001	6741701	5/25/2004	DUAL ECHO CANCELLER AND METHOD FOR INCREASING DYNAMIC RANGE OF A RECEIVER	Registered
128.	10/021199	10/30/2001	7154895	12/26/2006	SYSTEM, APPARATUS AND METHOD FOR ATM HEADER COMPRESSION FOR DSL LINKS	Registered
129.	10/021591	10/30/2001	7016489	3/21/2006	SYSTEM AND METHOD FOR PREDORMING ECHO CANCELLATION FOR NON-LINEARITIES	Registered
130.	10/039144	1/4/2002	6580286	6/17/2003	METHOD AND APPARATUS FOR ACTIVE LINE TERMINATION	Registered
131.	10/044726	1/11/2002	6531902	3/11/2003	LINE DRIVER OPERATIVE FROM A	Registered

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NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE	STATUS
					SINGLE SUPPLY AND METHOD FOR SUPPLYING VOLTAGES TO A LOAD	
132.	10/120941	4/10/2002	7142595	11/28/2006	SYSTEM AND METHOD FOR DECREASING CROSS-TALK EFFECTS IN TIME-DOMAIN-MODULATION (TDM) DIGITAL SUBSCRIBER LINE (DSL) SYSTEMS	Registered
133.	10/138365	5/3/2002	7133419	11/7/2006	SYSTEM AND METHOD FOR REDUCING POWER CONSUMPTION BY SPECTRAL SHAPING OF SIGNALS	Registered
134.	10/315743	12/10/2002	6829251	12/7/2004	SYSTEM AND METHOD FOR INCREASING DATA CAPACITY IN COMMUNICATION SYSTEMS	Registered
135.	10/211820	8/2/2002	7436849	10/14/2008	SYSTEM AND METHOD FOR PARTITIONING A DSLAM NETWORK	Registered
136.	10/214341	8/6/2002	7061987	6/13/2006	WIDE-BAND ANALOG FRONT-END FOR DSL APPLICATIONS	Registered
137.	10/213483	8/6/2002	6741120	5/25/2004	ACTIVE FILTER AND METHOD	Registered
138.	10/213476	8/6/2002	6696869	2/24/2004	BUFFER CIRCUIT FOR A HIGH-BANDWIDTH ANALOG TO DIGITAL CONVERTER	Registered
139.	10/213502	8/6/2002	6650177	11/18/2003	SYSTEM AND METHOD FOR TUNING AN RC CONTINUOUS-TIME FILTER	Registered
140.	10/224726	8/20/2002	7103097	9/5/2006	SYSTEM AND METHOD FOR REDUCING PEAK-TO-AVERAGE RATIO (PAR) VALUES	Registered
141.	10/947600	9/22/2004	7881458	2/1/2011	METHOD AND APPARATUS FOR ADAPTIVE HYBRID TERMINATION IN A MULTI-CARRIER COMMUNICATION SYSTEM	Registered
142.	09/541715	4/3/2000	6738418	5/18/2004	METHOD AND APPARATUS FOR ADAPTIVE DATA ALLOCATION IN A MULTI-CARRIER COMMUNICATION SYSTEM	Registered
143.	08/943484	10/3/1997	6101216	8/8/2000	SPLITTERLESS DIGITAL SUBSCRIBER LINE COMMUNICATION SYSTEM	Registered
144.	09/028210	2/23/1998	6161203	12/12/2000	COMMUNICATION SYSTEM UTILIZING REED-SOLOMON CODE TO ACHIEVE AUTO FRAME SYNCHRONIZATION ACQUISITION	Registered
145.	09/028023	2/23/1998	6430219	8/6/2002	METHOD OF AND APPARATUS FOR PERFORMING LINE CHARACTERIZATION IN A SUBSCRIBER LINE COMMUNICATION SYSTEM	Registered
146.	09/028016	2/23/1998	6445733	9/3/2002	METHOD OF AND APPARATUS FOR PERFORMING LINE CHARACTERIZATION IN A NON-IDLE MODE IN A SUBSCRIBER LINE COMMUNICATION SYSTEM	Registered
147.	09/028141	2/23/1998	6263077	7/17/2001	DIGITAL SUBSCRIBER LINE MODEM UTILIZING ECHO CANCELLATION TO REDUCE NEAR-END CROSS-TALK NOISE	Registered

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148.	11/193832	7/28/2005	7409626	8/5/2008	METHOD AND APPARATUS FOR DETERMINING CODEWORD INTERLEAVER PARAMETERS	Registered
149.	12/215000	6/24/2008	8335968	12/18/2012	METHOD AND APPARATUS FOR DETERMINING CODEWORD INTERLEAVER PARAMETERS	Registered
150.	11/431219	5/9/2006	7577881	8/18/2009	METHOD AND APPARATUS FOR AN INTERLEAVER	Registered
151.	11/901346	9/15/2007	7881362	2/1/2011	METHOD AND APPARATUS FOR DIFFERENTIATED COMMUNICATION CHANNEL ROBUSTNESS IN A MULTI-TONE TRANSCEIVER	Registered
152.	11/807006	5/24/2007	8711741	4/29/2014	METHOD AND APPARATUS FOR NETWORKED MODEMS	Registered
153.	11/981847	10/30/2007	8671128	3/11/2014	METHOD AND APPARATUS FOR A FINITE IMPULSE RESPONSE FILTER	Registered
154.	12/006158	12/31/2007	7659755	2/9/2010	METHOD AND APPARATUS INCLUDING A DRIVER FOR DRIVING A FLOATING BIPOLAR SWITCH	Registered
155.	09/303730	5/3/1999	6353644	3/5/2002	SYSTEM AND METHOD FOR PERFORMING TIME DOMAIN EQUALIZATION	Registered
156.	09/156158	9/17/1998	6466588	10/15/2002	APPARATUS FOR FACILITATING COMBINED POTS AND XDSL SERVICES AT A CUSTOMER PREMISES	Registered
157.	10/199270	7/18/2002	6608842	8/19/2003	APPARATUS FOR FACILITATING COMBINED POTS AND XDSL SERVICES AT A CUSTOMER PREMISES	Registered
158.	09/248440	2/11/1999	6621859	9/16/2003	COMBINED CABLE AND DSL MODEM FOR HIGH SPEED DATA COMMUNICATION	Registered
159.	08/982400	12/2/1997	6212227	4/3/2001	CONSTANT ENVELOPE MODULATION FOR SPLITTERLESS ADSL TRANSMISSION	Registered
160.	08/982421	12/2/1997	6151335	11/21/2000	MODULATION SWITCHING FOR DSL SIGNAL TRANSMISSION	Registered
161.	09/547424	4/11/2000	7173944	2/6/2007	MODULATION SWITCHING FOR DSL SIGNAL TRANSMISSION	Registered
162.	09/162845	9/29/1998	6356585	3/12/2002	POWER CUTBACK IN SPLITTERLESS ADSL SYSTEMS	Registered
163.	09/408639	9/30/1999	6711138	3/23/2004	DIGITAL SUBSCRIBER LINE/HOME PHONELINE NETWORK ROUTER	Registered
164.	09/309462	5/11/1999	6353909	3/5/2002	CONFIGURABLE ENCODER AND METHOD FOR GENERATING A REED-SOLOMON CODEWORD	Registered
165.	09/357706	7/20/1999	6725059	4/20/2004	SYSTEM AND METHOD FOR IMPROVING COMMUNICATIONS BETWEEN A DIGITAL LOOP CARRIER AND A CENTRAL OFFICE	Registered
166.	09/373841	8/13/1999	6584160	6/24/2003	SYSTEM AND METHOD FOR REDUCING THE EFFECTS OF CLIPPING IN A DMT TRANSCEIVER	Registered
167.	09/384672	8/27/1999	6281829	8/28/2001	MULTI-MODE ANALOG FRONT END	Registered

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168.	09/384671	8/27/1999	6580760	6/17/2003	LINE DRIVER ARCHITECTURE WITH PROGRAMMABLE GAIN AND DRIVE	Registered
169.	09/311964	5/14/1999	6490672	12/3/2002	METHOD FOR COMPUTING A FAST FOURIER TRANSFORM AND ASSOCIATED CIRCUIT FOR ADDRESSING A DATA MEMORY	Registered
170.	10/126602	6/5/2002	6629117	9/30/2003	METHOD FOR COMPUTING A FAST FOURIER TRANSFORM AND ASSOCIATED CIRCUIT FOR ADDRESSING A DATA MEMORY	Registered
171.	09/523747	3/13/2000	6480976	11/12/2002	SYSTEM AND METHOD FOR RESOURCE OPTIMIZED INTEGRATED FORWARD ERROR CORRECTION IN A DMT COMMUNICATION SYSTEM	Registered
172.	10/063384	4/17/2002	7203198	4/10/2007	SYSTEM AND METHOD FOR SWITCHING ASYNCHRONOUS TRANSFER MODE CELLS	Registered
173.	10/138700	5/6/2002	7272153	9/18/2007	SYSTEM AND METHOD FOR DISTRIBUTED PROCESSING OF PACKET DATA CONTAINING AUDIO INFORMATION	Registered
174.	11/844531	8/24/2007	7706402	4/27/2010	SYSTEM AND METHOD FOR DISTRIBUTED PROCESSING OF PACKET DATA CONTAINING AUDIO INFORMATION	Registered
175.	10/050128	1/18/2002	7113491	9/26/2006	METHOD AND SYSTEM FOR VARYING AN ECHO CANCELLER FILTER LENGTH BASED ON DATA RATE	Registered
176.	09/524464	3/13/2000	6536001	3/18/2003	CIRCUIT AND METHOD FOR CONVOLUTIONAL INTERLEAVING USING SINGLE MODULO OPERATION	Registered
177.	09/398636	9/17/1999	6477554	11/5/2002	CIRCUIT AND METHOD FOR COMPUTING FAST FOURIER TRANSFORM	Registered
178.	10/247144	9/19/2002	6615227	9/2/2003	CIRCUIT AND METHOD FOR COMPUTING FAST FOURIER TRANSFORM	Registered
179.	10/757587	1/15/2004	7725513	5/25/2010	MINIMUM PROCESSOR INSTRUCTION FOR IMPLEMENTING WEIGHTED FAIR QUEUING AND OTHER PRIORITY QUEUING	Registered
180.	09/457017	12/8/1999	6580752	6/17/2003	ALTERNATIVE CONFIGURATIONS FOR AN ADSL SYSTEM OPERATING IN A TIME DUPLEX NOISE ENVIRONMENT	Registered
181.	09/456451	12/8/1999	6266347	7/24/2001	SYSTEM AND METHOD FOR MODIFYING SYMBOL DURATION FOR THE EFFICIENT TRANSMISSION OF INFORMATION IN A TIME DUPLEX NOISE ENVIRONMENT	Registered
182.	10/161687	6/5/2002	7013271	3/14/2006	METHOD AND SYSTEM FOR IMPLEMENTING A LOW COMPLEXITY SPECTRUM ESTIMATION TECHNIQUE FOR COMFORT NOISE GENERATION	Registered
183.	10/321509	12/18/2002	6788236	9/7/2004	METHOD AND SYSTEM FOR IMPLEMENTING A SIGMA DELTA	Registered

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NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE	STATUS
					ANALOG-TO-DIGITAL CONVERTER	
184.	10/321508	12/18/2002	7076514	7/11/2006	METHOD AND SYSTEM FOR COMPUTING PRE-EQUALIZER COEFFICIENTS	Registered
185.	10/614338	7/8/2003	7474670	1/6/2009	METHOD AND SYSTEM FOR ALLOCATING BANDWIDTH	Registered
186.	10/340606	1/13/2003	7385995	6/10/2008	SYSTEM AND METHOD FOR DYNAMIC BANDWIDTH ALLOCATION IN PONS	Registered
187.	10/614214	7/8/2003	6854025	2/8/2005	DMA SCHEDULING MECHANISM	Registered
188.	10/250236	6/16/2003	7190731	3/13/2007	SYSTEM AND METHOD FOR APPLYING TRANSMIT WINDOWING IN ADSL + NETWORKS	Registered
189.	10/263506	10/4/2002	7397860	7/8/2008	FRACTIONAL LOCAL PEAK DETECTION & MITIGATION FOR PAR REDUCTION	Registered
190.	10/263732	10/4/2002	7136423	11/14/2006	SIDE TONE PACKETS INJECTION (STPI) FOR PAR REDUCTION (	Registered
191.	10/393345	3/21/2003	7120211	10/10/2006	ADAPTIVE RFI CANCELLER FOR DSL	Registered
192.	11/031020	1/10/2005	7974583	7/5/2011	REAL-TIME FORMATION OF OPTIMAL POWER SPECTRAL DENSITY MASKS	Registered
193.	10/808549	3/25/2004	7400710	7/15/2008	MIMO DYNAMIC PSD ALLOCATION FOR DSL NETWORKS	Registered
194.	11/248224	10/13/2005	7555052	6/30/2009	METHOD AND SYSTEM FOR TURBO TRELLIS CODED MODULATION SCHEME FOR COMMUNICATION SYSTEMS	Registered
195.	11/282109	1/18/2005	7352805	4/1/2008	SYSTEMS AND METHODS FOR ADAPTIVE VDSL WITH VARIABLE SAMPLING FREQUENCY AND TIME-DOMAIN EQUALIZER	Registered
196.	11/197524	8/5/2005	7400693	7/15/2008	SYSTEM AND METHOD OF ECHO CANCELLATION	Registered
197.	12/006141	12/13/2007	7728670	6/1/2010	METHOD AND APPARATUS FOR AN AMPLIFIER	Registered
198.	12/799154	4/20/2010	7944301	5/17/2011	METHOD AND APPARATUS FOR AN AMPLIFIER	Registered
199.	12/009196	1/16/2008	8345859	1/1/2013	METHOD AND APPARATUS FOR DSL LINE CARD POWER MANAGEMENT	Registered
200.	12/322002	1/28/2009	8036293	10/11/2011	METHOD AND APPARATUS FOR A MULTI-PROTOCOL xDSL LINE DRIVER	Registered
201.	12/322097	1/29/2009	7936679	5/3/2011	METHOD AND APPARATUS FOR MANAGING XDSL PSEUDO LINKS	Registered
202.	12/459129	6/25/2009	8223859	7/17/2012	METHOD AND APPARATUS FOR A MULTI-TONE MODEM	Registered
203.	12/583538	8/21/2009	8189457	5/29/2012	METHOD AND APPARATUS FOR DATA TRANSMISSION IN HOME NETWORKS	Registered
204.	12/583694	8/24/2009	8427933	4/23/2013	METHOD AND APPARATUS FOR DMT CROSSTALK CANCELLATION	Registered
205.	12/587448	10/6/2009	8588052	11/19/2013	METHOD AND APPARATUS FOR DMT NETWORK DATA TRANSFER	Registered
206.	12/661243	3/12/2010	8514917	8/20/2013	METHOD AND APPARATUS FOR DSL COMMUNICATION OVER 4 WIRE SYSTEM	Registered

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207.	12/802884	6/15/2010	8705676	4/22/2014	METHOD AND APPARATUS FOR CLOCK RECOVERY IN XDSL TRANSCEIVERS	Registered
208.	12/804545	7/23/2010	8498326	7/30/2013	METHOD AND APPARATUS FOR FORWARD ERROR CORRECTION	Registered
209.	08/951945	10/17/1997	6031868	2/29/2000	ASYMMETRIC DIGITAL SUBSCRIBER LOOP TRANSCEIVERS	Registered
210.	08/670337	6/25/1996	6028891	2/22/2000	ASYMMETRIC DIGITAL SUBSCRIBER LOOP TRANSCEIVER AND METHOD	Registered
211.	09/425396	10/22/1999	6490639	12/3/2002	PERIPHERAL COMPONENT INTERCONNECT (PCI) SINGLE CHANNEL MASTER DIRECT MEMORY ACCESS (DMA) SERVING TWO SEPARATE CHANNELS 09/425,396	Registered
212.	08/779806	1/8/1997	5917809	6/29/1999	ASYMMETRIC DIGITAL SUBSCRIBER LOOP MODEM AND METHOD	Registered
213.	09/470798	12/23/1999	6587502	7/1/2003	SYSTEM AND METHOD FOR PROFILE SELECTION DURING FAST RETRAIN OF A WIDEBAND MODEM 09/470,798	Registered
214.	09/471310	12/23/1999	6760348	7/6/2004	SYSTEM AND METHOD FOR TONE DETECTION IN A DISCRETE MULTI-TONE SYSTEM	Registered
215.	09/268830	3/16/1999	6347325	2/12/2002	DIRECT-DIGITAL SYNTHESIZERS	Registered
216.	08/677661	7/8/1996	5872811	2/16/1999	DIFFERENTIAL LINE DRIVER	Registered
217.	09/471685	12/23/1999	6646994	11/11/2003	SYSTEM AND METHOD FOR CONTROLLING DISTORTION IN THE POTS BAND IN A DUAL POTS AND DISCRETE MULTI-TONE COMMUNICATION SYSTEM	Registered
218.	08/861234	5/21/1997	6118814	9/12/2000	COMMUNICATION SYSTEM	Registered
219.	09/211533	12/14/1998	6298037	10/2/2001	NETWORK DATA FILTERING	Registered
220.	09/496793	2/2/2000	6985548	1/10/2006	SYSTEM AND METHOD FOR TIMING RECOVERY IN A DISCRETE MULTI-TONE SYSTEM 09/496,793	Registered
221.	09/578763	5/25/2000	6785296	8/31/2004	SYSTEM AND METHOD FOR PROVIDING BANDWIDTH MANAGEMENT WITHIN A SMALL OFFICE, HOME OFFICE NETWORK	Registered
222.	09/443700	11/19/1999	6603831	8/5/2003	SYNCHRONOUS DIGITAL DATA TRANSMITTER	Registered
223.	08/562981	11/27/1995	5757803	5/26/1998	POTS SPLITTER ASSEMBLY WITH IMPROVED TRANSHYBRID LOSS FOR DIGITAL SUBSCRIBER LOOP TRANSMISSION	Registered
224.	09/602413	6/23/2000	6583662	6/24/2003	CIRCUIT AND METHOD FOR IMPLEMENTING AN INTEGRATED CONTINUOUS-TIME SMOOTHING FILTER 09/602,413	Registered
225.	09/637748	8/11/2000	6351185	2/26/2002	INCREASED OUTPUT SWING LINE DRIVERS FOR OPERATION AT SUPPLY VOLTAGES EXCEEDING THE BREAKDOWN VOLTAGE OF THE TECHNOLOGY	Registered

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226.	08/917664	8/25/1997	5983388	11/9/1999	FORWARD ERROR CORRECTION ARRANGEMENT (FEC) FOR MULTIPOINT TO SINGLE POINT COMMUNICATION SYSTEMS	Registered
227.	09/0345575	3/4/1998	6163579	12/19/2000	BROADBAND MODEM TRANSFORMER HYBRID	Registered
228.	10/047180	11/9/2001	6756846	6/29/2004	INCREASED OUTPUT SWING LINE DRIVERS FOR OPERATION AT SUPPLY VOLTAGES EXCEEDING THE BREAKDOWN VOLTAGE OF THE TECHNOLOGY	Registered
229.	09/217718	12/21/1998	6542540	4/1/2003	INTEGRATED ANALOG ADAPTIVE EQUALIZER	Registered
230.	09/419027	10/15/1999	6594319	7/15/2003	APPARATUS AND METHOD FOR DETERMINING THE CLOSEST COSET POINTS IN A TRELLIS DECODER	Registered
231.	09/637747	8/11/2000	6538510	3/25/2003	HIGH EFFICIENCY, CURRENT SINK ONLY LINE DRIVER	Registered
232.	09/640123	8/16/2000	6765954	7/20/2004	SYSTEM AND METHOD FOR IMPLEMENTING A DELTA-SIGMA MODULATOR INTEGRITY SUPERVISOR	Registered
233.	10/786670	2/25/2004	7558316	7/7/2009	SYSTEM AND METHOD FOR IMPLEMENTING A DELTA-SIGMA MODULATOR INTEGRITY SUPERVISOR	Registered
234.	10/786669	2/25/2004	7555036	6/30/2009	SYSTEM AND METHOD FOR IMPLEMENTING A DELTA-SIGMA MODULATOR INTEGRITY SUPERVISOR	Registered
235.	09/862911	5/22/2001	6956872	10/18/2005	SYSTEM AND METHOD FOR ENCODING DSL INFORMATION STREAMS HAVING DIFFERING LATENCIES	Registered
236.	09/689053	10/12/2000	6804318	10/12/2004	SYSTEM AND METHOD FOR USING A NETWORK TIMING REFERENCE CIRCUIT AS A PHASE DETECTOR IN A SYNCHRONIZATION LOOP	Registered
237.	09/715293	11/17/2000	6788745	9/7/2004	DIFFERENTIAL LINE DRIVER CIRCUIT WITH ACTIVE TERMINATION	Registered
238.	09/892003	6/26/2001	6801621	10/5/2004	ACTIVE TERMINATOR LINE INTERFACE	Registered
239.	09/746873	12/22/2000	6813325	11/2/2004	SYSTEM AND METHOD TO REDUCE TRANSMIT WANDER IN A DIGITAL SUBSCRIBER LINE	Registered
240.	09/793172	2/26/2001	6971057	11/29/2005	EFFICIENT METHOD FOR DMT CONVOLUTIONAL INTERLEAVING/DEINTERLEAVING	Registered
241.	11/297634	12/9/2005	7408999	8/5/2008	METHOD AND SYSTEM FOR DYNAMIC INTERLEAVER ADAPTATION SCHEME IN VDSL	Registered
242.	11/297632	12/9/2005	7466758	12/16/2008	METHOD AND SYSTEM FOR DYNAMIC INTERLEAVER ADAPTATION SCHEME IN VDSL	Registered
243.	11/009710	12/13/2004	7295603	11/13/2007	METHOD AND SYSTEM FOR VIRTUAL EXCHANGE REFERENCE IMPACT (VERI) FOR USE IN MIXED SPECTRUM MANAGEMENT IN DSL	Registered

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244.	09/994247	11/26/2001	6731166	5/4/2004	POWER AMPLIFIER SYSTEM WITH MULTIPLE PRIMARY WINDINGS	Registered
245.	09/995967	11/28/2001	6563445	5/13/2003	SELF-CALIBRATION METHODS AND STRUCTURES FOR PIPELINED ANALOG-TO-DIGITAL CONVERTERS	Registered
246.	10/176023	6/20/2002	6774723	8/10/2004	OUTPUT STAGE WITH STABLE QUIESCENT CURRENT	Registered
247.	08/898166	7/22/1997	6088390	7/11/2000	INTEGRATING DECISION FEEDBACK EQUALIZATION AND FORWARD ERROR CORRECTION TO IMPROVE PERFORMANCE IN POINT-TO-MULTIPOINT DIGITAL TRANSMISSION	Registered
248.	09/346781	7/7/1999	6236714	5/22/2001	TRANSMIT POWER CONTROL FOR DSL MODEMS IN SPLITTERLESS ENVIRONMENT	Registered
249.	09/759694	1/12/2001	6622282	9/16/2003	TRELLIS CODING WITH ONE-BIT CONSTELLATIONS	Registered
250.	10/750445	12/31/2003	7373425	5/13/2008	HIGH SPEED MAC ADDRESS SEARCH ENGINE	Registered
251.	10/812141	3/29/2004	7486688	2/3/2009	COMPACT PACKET SWITCHING NODE STORAGE ARCHITECTURE EMPLOYING DOUBLE DATA RATE SYNCHRONOUS DYNAMIC RAM	Registered
252.	12/327919	12/4/2008	7760726	7/20/2010	COMPACT PACKET SWITCHING NODE STORAGE ARCHITECTURE EMPLOYING DOUBLE DATA RATE SYNCHRONOUS DYNAMIC RAM	Registered
253.	09/620779	7/21/2000	6937616	8/30/2005	METHOD AND APPARATUS FOR PROVIDING PACKET BASED AND DISTRIBUTED X-DSL COMMUNICATION	Registered
254.	09/779257	2/7/2001	6965657	11/15/2005	METHOD AND APPARATUS FOR INTERFERENCE CANCELLATION IN SHARED COMMUNICATION MEDIUMS	Registered
255.	09/776067	2/2/2001	6959036	10/25/2005	METHOD AND APPARATUS FOR AN X-DSL MODEM SUPPORTING MULTIPLE X-DSL LINE CODES	Registered
256.	09/876263	6/6/2001	6963603	11/8/2005	METHOD AND APPARATUS FOR PRE-COMPENSATION OF AN XDSL MODEM (09/876,263)	Registered
257.	09/602639	6/22/2000	6304205	10/16/2001	A/D MULTI-CHANNEL PIPELINE ARCHITECTURE	Registered
258.	09/715633	11/17/2000	6567031	5/20/2003	A/D MULTI-CHANNEL PIPELINE ARCHITECTURE	Registered
259.	09/698824	10/26/2000	7028063	4/11/2006	METHOD AND APPARATUS FOR A DFT/IDFT ENGINE SUPPORTING MULTIPLE X-DSL PROTOCOLS	Registered
260.	09/699193	10/26/2000	6940807	9/6/2005	METHOD AND APPARATUS FOR A X-DSL COMMUNICATION PROCESSOR	Registered
261.	09/598012	6/20/2000	6760434	7/6/2004	DUAL IMPEDANCE HYBRID	Registered
262.	09/779790	2/7/2001	7106789	9/12/2006	METHOD AND APPARATUS FOR PROVISIONING TDM AND PACKET BASED COMMUNICATIONS ON A VDSL COMMUNICATION MEDIUM	Registered

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263.	09/779256	2/7/2001	6873653	3/29/2005	METHOD AND APPARATUS FOR PREDISTORTION OF AN X-DSL LINE DRIVER	Registered
264.	09/779254	2/7/2001	6466088	10/15/2002	METHOD AND APPARATUS FOR MULTI-CHANNEL X-DSL LINE DRIVER	Registered
265.	09/779255	2/7/2001	6512739	1/28/2003	METHOD AND APPARATUS FOR DOWN CONVERSION WITHIN AN X-DSL RECEIVER	Registered
266.	09/779789	2/7/2001	6985521	1/10/2006	METHOD AND APPARATUS FOR CHANNEL ESTIMATION FOR X-DSL COMMUNICATIONS	Registered
267.	09/779788	2/7/2001	7075998	7/11/2006	METHOD AND APPARATUS FOR SYMMETRICAL DMT X-DSL COMMUNICATIONS	Registered
268.	09/776066	2/2/2001	6842429	1/11/2005	METHOD AND APPARATUS FOR SYNCHRONIZING A PACKET BASED MODEM SUPPORTING MULTIPLE X-DSL PROTOCOLS	Registered
269.	09/837914	4/18/2001	7315571	1/1/2008	METHOD AND APPARATUS FOR A VARIABLE BANDWIDTH MULTI-PROTOCOL X-DSL TRANSCEIVER	Registered
270.	09/859196	5/14/2001	6392579	5/21/2002	METHOD AND APPARATUS FOR A DAC WITH A NON UNIFORM SAMPLING RATE	Registered
271.	09/859182	5/14/2001	7092412	8/15/2006	METHOD AND APPARATUS FOR LONG HAUL HIGH SPEED DATA TRANSMISSION OVER XDSL PSEUDO CHANNELS	Registered
272.	09/876195	6/6/2001	6516049	2/4/2003	METHOD AND APPARATUS FOR INSERTION LOSS ESTIMATION IN WIRELINE COMMUNICATIONS	Registered
273.	09/955616	9/18/2001	6718019	4/6/2004	METHOD AND APPARATUS FOR WIRELINE CHARACTERIZATION	Registered
274.	09/876201	6/6/2001	7076010	7/11/2006	METHOD AND APPARATUS FOR TIME DOMAIN EQUALIZATION IN AN X-DSL MODEM	Registered
275.	09/881857	6/13/2001	6501405	12/31/2002	METHOD AND APPARATUS FOR DIGITAL TO ANALOG CONVERSION WITH DISTORTION CALIBRATION	Registered
276.	09/326782	6/4/1999	6804267	10/12/2004	TRANSCEIVER TRAINING FOR DSL MODEMS UNDER TCM-ISDN INTERFERENCE	Registered
277.	09/570804	5/15/2000	6850618	2/1/2005	CENTRAL OFFICE INTERFACE TECHNIQUES FOR DIGITAL SUBSCRIBER LINES	Registered
278.	09/514976	2/29/2000	6628704	9/30/2003	EQUALIZER TRAINING FOR ADSL TRANSCEIVERS UNDER TCM-ISDN CROSSTALK ENVIRONMENT	Registered
279.	09/515415	2/29/2000	6724849	4/20/2004	METHOD AND APPARATUS FOR TIMING RECOVERY IN ADSL TRANSCEIVERS UNDER A TCM-ISDN CROSSTALK ENVIRONMENT	Registered
280.	09/628385	8/1/2000	6754285	6/22/2004	SIGNAL CONDITIONING TECHNIQUES IN DMT-BASED TRANSMISSIONS	Registered

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281.	09/962490	9/24/2001	6987851	1/17/2006	METHOD AND APPARATUS FOR A HIGH EFFICIENCY LINE DRIVER	Registered
282.	11/267652	11/3/2005	7443977	10/28/2008	METHOD AND APPARATUS FOR A HIGH EFFICIENCY LINE DRIVER	Registered
283.	10/071536	2/8/2002	7035326	4/25/2006	METHOD AND APPARATUS FOR INITIALIZING MODEM COMMUNICATIONS	Registered
284.	10/095618	3/11/2002	6976202	12/13/2005	METHOD AND APPARATUS FOR TIME-FREQUENCY DOMAIN FORWARD ERROR CORRECTION FOR DIGITAL COMMUNICATION SYSTEMS	Registered
285.	10/117823	4/5/2002	7076002	7/11/2006	METHOD AND APPARATUS FOR SYMBOL TIMING ACQUISITION FOR VDSL SIGNALS	Registered
286.	09/846883	5/1/2001	6865190	3/8/2005	FRAMING TECHNIQUES FOR ADSL SYSTEMS	Registered
287.	09/810422	3/15/2001	7180936	2/20/2007	TECHNIQUES TO AVOID G.HS FALSE START DUE TO FEXT	Registered
288.	08/862127	5/22/1997	5889856	3/30/1999	ADSL INTEGRATED LINE CARD WITH DIGITAL SPLITTER AND POTS CODEC WITHOUT BULKY ANALOG SPLITTER	Registered
289.	08/958763	10/25/1997	5991311	11/23/1999	TIME-MULTIPLEXED TRANSMISSION ON DIGITAL-SUBSCRIBER LINES SYNCHRONIZED TO EXISTING TCM ISDN FOR REDUCED CROSS-TALK	Registered
290.	10/290973	11/7/2002	7406042	7/29/2008	METHOD AND APPARATUS FOR DYNAMIC MULTI-LINE BONDING IN COMMUNICATION SYSTEMS	Registered
291.	10/334623	12/30/2002	7356049	4/8/2008	METHOD AND APPARATUS FOR OPTIMIZATION OF CHANNEL CAPACITY IN MULTI-LINE COMMUNICATION SYSTEMS USING SPECTRUM MANAGEMENT TECHNIQUES	Registered
292.	10/392674	3/18/2003	7191387	3/13/2007	METHOD AND APPARATUS FOR FORWARD ERROR CORRECTION	Registered
293.	10/453571	6/3/2003	6924701	8/2/2005	METHOD AND APPARATUS FOR COMPENSATING AN AMPLIFIER	Registered
294.	11/008432	12/8/2004	7356048	4/8/2008	METHOD AND APPARATUS FOR NETWORK MODEMS ON A SHARED COMMUNICATIONS CHANNEL	Registered
295.	11/081419	3/15/2005	7359444	4/15/2008	METHOD AND APPARATUS FOR EXTENDING THE FREQUENCY RANGE OF MULTI-TONE MODEMS	Registered
296.	11/980832	10/30/2007	7443918	10/28/2008	METHOD AND APPARATUS FOR EXTENDING THE FREQUENCY RANGE OF MULTI-TONE MODEMS	Registered
297.	11/132909	5/18/2005	7532666	5/12/2009	METHOD AND APPARATUS FOR ERROR CORRECTION IN MULTI-LINE MULTI-TONE GIGABIT TRANSMISSION SYSTEMS	Registered
298.	11/175794	7/5/2005	7822124	10/26/2010	METHOD AND APPARATUS FOR ADAPTIVE ITERATIVE DECISION FEEDBACK CONTROL CODING IN MODEMS	Registered

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299.	10/714354	11/14/2003	7486608	2/3/2009	EFFICIENT IMPLEMENTATION OF LOW POWER MODE IN DIGITAL SUBSCRIBER LINE (DSL) TRANSCEIVERS	Registered
300.	10/836954	4/30/2004	7577084	8/18/2009	ISDN CROSSTALK CANCELLATION IN A DSL SYSTEM	Registered
301.	10/676385	9/30/2003	7269210	9/11/2007	ELECTRICAL ISOLATION TECHNIQUES FOR DSL MODEM	Registered
302.	10/804704	3/19/2004	7577205	8/18/2009	RETURN-LOSS COMPLIANT DSL MODEM LINE INTERFACE UNIT WITH COMPLEX TERMINATION	Registered
303.	10/827800	4/19/2004	7058152	6/6/2006	METHOD AND APPARATUS FOR TIMING RECOVERY IN ADSL TRANSCEIVERS UNDER A TCM-ISDN CROSSTALK ENVIRONMENT	Registered
304.	11/101945	4/8/2005	7623630	11/24/2009	DOUBLE ENDED LINE PROBING (DELP) FOR DSL SYSTEMS	Registered
305.	12/997222	12/9/2010	8854941	10/7/2014	VECTORED DSL CROSSTALK CANCELLATION	Registered
306.	13/002213	12/30/2010	8687497	4/1/2014	REDUCED MEMORY VECTORED DSL	Registered
307.	13/058477	2/10/2011	8619843	12/31/2013	ALIEN INTERFERENCE REMOVAL IN VECTORED DSL	Registered
308.	09/124333	7/29/1998	6373860	4/16/2002	DYNAMICALLY-ASSIGNED VOICE AND DATA CHANNELS IN A DIGITAL-SUBSCRIBER LINE (DSL)	Registered
309.	09/251723	2/17/1999	6449288	9/10/2002	BI-LEVEL FRAMING STRUCTURE FOR IMPROVED EFFICIENCY DSL OVER NOISY LINES	Registered
310.	09/162431	9/28/1998	6240141	5/29/2001	LOWER-COMPLEXITY PEAK-TO-AVERAGE REDUCTION USING INTERMEDIATE-RESULT SUBSET SIGN-INVERSION FOR DSL	Registered
311.	09/866498	5/25/2001	6826278	11/30/2004	CENTRAL OFFICE INTERFACE TECHNIQUES FOR DIGITAL SUBSCRIBER LINES	Registered
312.	10/118859	4/8/2002	7177350	2/13/2007	RECEIVER TRANSPARENT QUIESCENT MODE OPERATION IN A DSL TRANSMISSION SYSTEM	Registered
313.	10/160296	5/30/2002	6760433	7/6/2004	CENTRAL OFFICE INTERFACE TECHNIQUES FOR DIGITAL SUBSCRIBER LINES	Registered
314.	10/056786	1/22/2002	6725176	4/20/2004	LOOP DIAGNOSTICS FOR ADSL SYSTEMS	Registered
315.	10/112622	3/29/2002	7106760	9/12/2006	CHANNEL BONDING IN SHDSL SYSTEMS	Registered
316.	10/187384	6/28/2002	7376157	5/20/2008	SYNCHRONIZING ADSL ANNEX C RECEIVERS TO TTR	Registered
317.	10/187388	6/28/2002	7260117	8/21/2007	SYNCHRONIZING INITIAL HANDSHAKE IN ADSL ANNEX C TO TTR	Registered
318.	10/672079	9/29/2003	7764752	7/27/2010	METHOD AND SYSTEM FOR REDUCING INTERFERENCES DUE TO HANDSHAKE TONES	Registered

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319.	10/408364	4/8/2003	7212595	5/1/2007	REDUCED COMPLEXITY TIME-FREQUENCY EQUALIZER FOR DISCRETE MULTI-TONE BASED DSL SYSTEMS	Registered
320.	08/538106	10/2/1995	6122279	9/19/2000	ASYNCHRONOUS TRANSFER MODE SWITCH	Registered
321.	10/618678	7/15/2003	7289554	10/30/2007	METHOD AND APPARATUS FOR CHANNEL EQUALIZATION AND CYCLOSTATIONARY INTERFERENCE REJECTION FOR ADSL-DMT MODEMS	Registered
322.	10/874329	6/24/2004	7653138	1/26/2010	TECHNIQUE FOR IMPROVING MULTIPLE-CHANNEL MULTI-TONE TRANSMISSIONS	Registered
323.	10/849569	5/20/2004	7457353	11/25/2008	METHOD AND SYSTEM FOR MITIGATING FOURIER TRANSFORM SIDE LOBES	Registered
324.	10/860286	6/4/2004	7457368	11/25/2008	MULTILEVEL CHANNEL CODING IN ADSL	Registered
325.	10/702456	11/7/2003	7400627	7/15/2008	ATM HEADER COMPRESSION USING HASH TABLES	Registered
326.	12/042930	3/5/2008	7720071	5/18/2010	ATM HEADER COMPRESSION USING HASH TABLES	Registered
327.	10/714660	11/18/2003	7738541	6/15/2010	ENHANCED SMART DSL SYSTEMS FOR LDSL	Registered
328.	10/714655	11/18/2003	7406126	7/29/2008	IMPLEMENTATION OF SMART DSL FOR LDSL SYSTEMS	Registered
329.	10/970718	10/22/2004	7613985	11/3/2009	HIERARCHICAL TRELLIS CODED MODULATION	Registered
330.	12/565939	9/24/2009	8418018	4/9/2013	HIERARCHICAL TRELLIS CODED MODULATION	Registered
331.	09/904924	7/13/2001	6990062	1/24/2006	REDUCED COMPLEXITY DMT/OFDM TRANSCEIVER	Registered
332.	09/394619	9/13/1999	6252902	6/26/2001	XDSL MODEM HAVING DMT SYMBOL BOUNDARY DETECTION	Registered
333.	09/394091	9/13/1999	6233276	5/15/2001	XDSL MODEM HAVING TIME DOMAIN FILTER FOR ISI MITIGATION	Registered
334.	08/690243	7/19/1996	5751701	5/12/1998	RATE ADAPTIVE DIGITAL SUBSCRIBER LINE (RADSL)	Registered
335.	09/016994	2/2/1998	6167034	12/26/2000	RATE ADAPTIVE DIGITAL SUBSCRIBER LINE (RADSL) MODEM	Registered
336.	08/586008	12/29/1995	5703904	12/30/1997	IMPULSE NOISE EFFECT REDUCTION	Registered
337.	08/579713	12/28/1995	5732112	3/24/1998	CHANNEL TRAINING OF MULTI-CHANNEL RECEIVER SYSTEM	Registered
338.	08/974395	11/19/1997	6067316	5/23/2000	CIRCUIT FOR COMBINED XDSL AND OTHER SERVICES	Registered
339.	08/469558	6/6/1995	5898710	4/27/1999	IMPLIED INTERLEAVING, A FAMILY OF SYSTEMATIC INTERLEAVERS AND DEINTERLEAVERS	Registered
340.	09/058346	4/10/1998	5968200	10/19/1999	IMPLIED INTERLEAVING, A FAMILY OF SYSTEMATIC INTERLEAVERS AND DEINTERLEAVERS	Registered
341.	09/050474	3/30/1998	5852630	12/22/1998	METHOD AND APPARATUS FOR A RADSL TRANSCEIVER WARM START	Registered

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					ACTIVATION PROCEDURE WITH PRECODING	
342.	09/113468	7/10/1998	6219386	4/17/2001	FRAMELESS REED-SOLOMON CODING SYSTEM AND METHOD	Registered
343.	08/932899	9/18/1997	6301337	10/9/2001	COMBINED HANDSET AND POTS FILTER	Registered
344.	08/944941	10/2/1997	5970098	10/19/1999	AN IMPROVED MULTILEVEL ENCODER	Registered
345.	08/953082	10/17/1997	5991336	11/23/1999	SYSTEM AND METHOD FOR OPTIMIZING HIGH SPEED DATA TRANSMISSION	Registered
346.	09/045434	3/20/1998	6009132	12/28/1999	SYSTEM AND METHOD FOR OBTAINING CLOCK RECOVERY FROM A RECEIVED DATA SIGNAL	Registered
347.	09/014813	1/28/1998	6144733	11/7/2000	RING FILTER FOR POTS COMMUNICATION SYSTEM	Registered
348.	09/022564	2/12/1998	6208732	3/27/2001	SWITCHED HYBRID CIRCUIT FOR USE WITH DIGITAL SUBSCRIBER LINES	Registered
349.	09/311969	5/14/1999	6549925	4/15/2003	CIRCUIT FOR COMPUTING A FAST FOURIER TRANSFORM	Registered
350.	09/127414	7/31/1998	6385234	5/7/2002	TRANSCEIVER CIRCUIT AND METHOD	Registered
351.	10/721259	11/26/2003	7372900	5/13/2008	METHOD AND SYSTEM FOR SELECTING AN OPTIMAL ASYMMETRIC DIGITAL SUBSCRIBER LINE MODE	Registered
352.	10/824611	4/15/2004	7580379	8/25/2009	TECHNIQUE FOR DYNAMIC BIN ALLOCATION	Registered
353.	10/996054	11/24/2004	7564932	7/21/2009	METHOD AND SYSTEM FOR ENHANCING BIT RATE IN DMT QUAD SPECTRUM SYSTEMS	Registered
354.	09/525452	3/14/2000	6813311	11/2/2004	NON-LINEAR ECHO CANCELLATION FOR WIRELESS MODEMS AND THE LIKE	Registered
355.	09/639515	8/15/2000	6934328	8/23/2005	RELAXED, MORE OPTIMUM TRAINING FOR MODEMS AND THE LIKE	Registered
356.	09/552010	4/19/2000	6643676	11/4/2003	INITIALIZATION/PREWINDOWING REMOVAL POSTPROCESSING FOR FAST RLS FILTER ADAPTATION	Registered
357.	09/639714	8/14/2000	6769090	7/27/2004	UNIFIED TECHNIQUE FOR MULTI-RATE TRELLIS CODING AND DECODING	Registered
358.	11/559772	11/14/2006	7813434	10/12/2010	SYSTEMS AND METHODS FOR IMPROVED BIT LOADING FOR DISCRETE MULTI-TONE MODULATED MULTIPLE LATENCY APPLICATIONS	Registered
359.	11/513096	8/31/2006	7907658	3/15/2011	SYSTEMS AND METHODS FOR RESOLVING SIGNAL-TO-NOISE RATIO MARGIN DIFFERENCE IN DUAL LATENCY DISCRETE MULTI-TONE-BASED XDSL SYSTEMS UNDER COLORED NOISE CONDITIONS	Registered
360.	11/513089	8/31/2006	7796685	9/14/2010	SYSTEMS AND METHODS FOR MINIMUM-POWER LEAKAGE WINDOWING FOR VDSL USING LEAST SQUARE TECHNIQUE	Registered

NO.	PUB. NO./ SERIAL NO.	PUB. DATE/ DATE FILED	PATENT NO.	ISSUE DATE	TITLE	STATUS
361.	10/054294	11/13/2001	6804292	10/12/2004	BROADBAND I/O CIRCUITS, INTERFACE AND BUS	Registered
362.	10/952435	9/29/2004	8958468	2/17/2015	SYSTEM AND METHOD FOR CANCELING RADIO FREQUENCY INTERFERERS (RFI'S) IN XDSL SIGNALS	Registered
363.	13/368810	2/8/2012	8891638	11/18/2014	SYSTEM AND METHOD FOR IMPROVING SPECTRAL EFFICIENCY AND PROFILING OF CROSSTALK NOISE IN SYNCHRONIZED MULTI-USER MULTICARRIER COMMUNICATIONS	Registered
364.	13/456113	4/25/2012	8972517	3/3/2015	METHOD AND APPARATUS FOR MAINTAINING AND MIGRATING A DISTRIBUTED CACHE IN A NETWORKED ENVIRONMENT	Registered
365.	13/493914	6/11/2012	8917747	12/23/2014	METHOD AND APPARATUS FOR DSL BACK-CHANNEL COMMUNICATION	Registered
366.	13/625191	9/24/2012	8923487	12/30/2014	DIAGNOSTICS PRIMITIVES ON L2/ERB NORMALIZED ERROR SAMPLES	Registered
367.	13/705131	12/4/2012	8654866	2/18/2014	METHOD AND APPARATUS FOR OPTIMIZING DYNAMIC RANGE IN DMT MODEMS	Registered
368.	14/144116	12/30/2013	8897347	11/25/2014	ALIEN INTERFERENCE REMOVAL IN VECTORED DSL	Registered
369.	10/211434	8/2/2002	8015303	9/6/2011	HIGH DATA RATE STATEFUL PROTOCOL PROCESSING	Registered
370.	10/660055	9/10/2003	7814218	10/12/2010	MULTI-PROTOCOL AND MULTI-FORMAT STATEFUL PROCESSING	Registered
371.	12/209153	9/11/2008	8151278	4/3/2012	SYSTEM AND METHOD FOR TIMER MANAGEMENT IN A STATEFUL PROTOCOL PROCESSING SYSTEM	Registered
372.	10/661096	9/12/2003	7539760	5/26/2009	SYSTEM AND METHOD FOR FACILITATING FAILOVER OF STATEFUL CONNECTIONS	Registered
373.	10/661084	9/12/2003	7802001	9/21/2010	SYSTEM AND METHOD FOR FLOW CONTROL WITHIN A STATEFUL PROTOCOL PROCESSING SYSTEM	Registered

EXHIBIT C

Trademarks

Mark	App. No./ App. Date	Reg. No./ Reg. Date
Design Only	85265146 11-MAR-2011	4012664 16-AUG-2011
IKANOS	85265195 11-MAR-2011	4012665 16-AUG-2011
IKANOS NODESCALE	85227177 26-JAN-2011	4601748 09-SEP-2014
IKANOS VELOCITY	85220332 18-JAN-2011	4015534 23-AUG-2011
FUSIV	78297948 09-SEP-2003	2958426 31-MAY-2005
IKANOS	76081331 29-JUN-2000	2778190 28-OCT-2003

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