503640395 01/08/2016

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3687028

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
NATURE OF CONVEYANCE:	Corrective Assignment to correct the THE ASSIGNEE FROM WI-LAN, INC. TO WI-LAN INC. previously recorded on Reel 033798 Frame 0393. Assignor(s) hereby confirms the ASSIGNMENT OF ASSIGNOR'S INTEREST.

### **CONVEYING PARTY DATA**

Name	Execution Date
NEXTWAVE BROADBAND INC.	07/16/2009

# **RECEIVING PARTY DATA**

Name:	WI-LAN INC.	
Street Address:	303 TERRY FOX DRIVE, STE 300	
City:	OTTAWA	
State/Country:	CANADA	
Postal Code:	K2K3J1	

# **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Patent Number:	8767726	

# **CORRESPONDENCE DATA**

Fax Number:

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.

Email: rleonard@vklaw.com

Correspondent Name: VOLPE AND KOENIG, P.C. Address Line 1: 30 S.17TH ST, STE 1800

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103

ATTORNEY DOCKET NUMBER:	WIN-P00502US2	
NAME OF SUBMITTER:	ROBERT D. LEONARD	
SIGNATURE:	/Robert D. Leonard/	
DATE SIGNED:	01/08/2016	

### **Total Attachments: 10**

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PATENT 503640395 REEL: 037461 FRAME: 0235

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502987542 09/23/2014

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3034141

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
NEXTWAVE BROADBAND, INC.	07/16/2009

# **RECEIVING PARTY DATA**

Name:	WI-LAN, INC.	
Street Address:	303 TERRY FOX DRIVE	
Internal Address:	SUITE 300	
City:	OTTAWA	
State/Country:	CANADA	
Postal Code:	K2K 3J1	

# **PROPERTY NUMBERS Total: 2**

Property Type	Number		
Application Number:	14286201		
Application Number:	12906693		

# **CORRESPONDENCE DATA**

**Fax Number:** (215)568-6499

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:** 2155686400

Email:cwalsh@vklaw.comCorrespondent Name:CHRISTINA R. WALSHAddress Line 1:30 SOUTH 17TH STREET

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103

ATTORNEY DOCKET NUMBER:	WIN-P00502US3 AND US2	
NAME OF SUBMITTER:	CHRISTINA R. WALSH	
SIGNATURE:	/Christina R. Walsh/	
DATE SIGNED:	09/23/2014	

# **Total Attachments: 8**

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PATENT

REEL: 037461 FRAME: 0237

#### SCHEDULE B

# Form of Patent Assignment for Recordation

# PATENT ASSIGNMENT

Pursuant to the Patent Sale and Transfer Agreement dated July 16, 2009 (the "Patent Agreement"), and for and in consideration of good and valuable consideration, the receipt of which is hereby acknowledged, NextWave Broadband Inc., having its address at 10350 Science Center Drive, Suite 210, San Diego, CA 92121-1138, USA ("Assignor") a Delaware corporation has sold, assigned and transferred, and does hereby sell, assign and transfer, unto Wi-LAN Inc., having its address at 11 Holland Avenue, Suite 608, Ottawa, Ontario, K1Y 4S1, Canada ("ASSIGNEE") and its successors and assigns, Assignor's entire right, title and interest in and to certain inventions and/or improvements in the patents and applications listed on Exhibit A to this Patent Assignment, together with the entire right, title and interest in and to said application, and/or in and to Letters Patent which may be issued upon said application, and any divisions, extensions, continuations or reissues thereof including, in each such case, all rights to sue for infringement of any of the patents, whether arising prior to, on or subsequent to the date of this Patent Assignment and including the right to collect past damages for any such infringement.

Assignor hereby also sells, assigns and transfers unto ASSIGNEE the entire right, title and interest in and to said inventions and in and to applications for Letters Patent therefor in all countries foreign to the United States of America, including all rights under any and all international conventions and treaties in respect of said inventions and said applications for Letters Patent in foreign countries, and further authorizes ASSIGNEE to apply for Letters Patent in foreign countries directly in its own name, and to claim priority of the filing date of the application for Letters Patent of the United States of America under the provisions of any and all international conventions and treaties.

Assignor agrees that, when requested, it will reasonably cooperate to sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents for said inventions in any and all countries and for vesting title thereto in ASSIGNEE, its successors, assigns and legal representatives or nominees.

This Patent Assignment is subject to the terms and provisions of the Patent Agreement and in the event of a conflict between this Assignment and the Patent Agreement, the terms of the Patent Agreement shall control.

ASSIGNOR DOES HEREBY CONSTITUTE AND APPOINT ASSIGNEE, ITS SUCCESSORS AND ASSIGNS, AS ASSIGNOR'S TRUE AND LAWFUL ATTORNEY, WITH FULL POWER OF SUBSTITUTION FOR ASSIGNOR, AND IN ITS NAME, PLACE AND STEAD OR OTHERWISE, BUT ON BEHALF OF AND FOR THE BENEFIT OF ASSIGNEE, ITS SUCCESSORS AND ASSIGNS, THE AUTHORITY AND POWER FOR THE PURPOSE TO TAKE ALL ACTIONS AND EXECUTE ALL DOCUMENTS ON BEHALF OF ASSIGNOR NECESSARY TO EFFECT THIS PATENT ASSIGNMENT, AND FROM TIME TO TIME TO INSTITUTE AND PROSECUTE IN ASSIGNOR'S NAME OR OTHERWISE, BUT AT THE DIRECTION AND EXPENSE

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AND FOR THE BENEFIT OF ASSIGNEE AND ITS SUCCESSORS AND ASSIGNS, ANY AND ALL PROCEEDINGS AT LAW, IN EQUITY OR OTHERWISE, WHICH ASSIGNEE, ITS SUCCESSORS OR ASSIGNS MAY DEEM PROPER IN ORDER TO COLLECT, ASSERT OR ENFORCE ANY CLAIM, RIGHT OR TITLE OF ANY KIND IN RELATION TO THIS PATENT ASSIGNMENT AND TO DEFEND AND COMPROMISE ANY AND ALL ACTIONS, SUITS AND PROCEEDINGS IN RESPECT OF THIS PATENT ASSIGNMENT AND TO DO ANY AND ALL SUCH ACTS AND THINGS IN RELATION THERETO AS ASSIGNEE, ITS SUCCESSORS OR ASSIGNS SHALL DEEM ADVISABLE, ASSIGNOR HEREBY DECLARING THAT THE APPOINTMENT HEREBY MADE AND THE POWERS HEREBY GRANTED ARE COUPLED WITH AN INTEREST AND ARE AND SHALL BE IRREVOCABLE BY ASSIGNOR IN ANY MANNER OR FOR ANY REASON.

IN WITNESS WHEREOF, the Parties have executed this Patent Assignment as of the date below.

**ASSIGNOR:** 

ASSIGNEE:

NEXTWAVE BROADBAND, INC.

By:

Date:

WI-LAN INC

Title:

By:

Date:

lh.

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EXHIBIT A (Patents)

FILE#	FILING DATE	SERIAL NUMBER	STAGE	TITLE
	31-Jul-96	8690036	Issued - #5,883,927 3/16/99	Digital Wireless Telecommunication Device for Reduced Interference with hearing Aids
06-066USA	18-May-06	11419188	Abandoned	Mode Switching ASIC and Wireless Communications Equipment
05-015PCT	16-Jan-08	PCTUS08051181	Pending	Tiling Allocations for Wireless Communication
05-015USA	22-Jan-07	11625773	Pending	Tiling Allocations for Wireless Communication
05-019TW	2-Jul-07	96123994	Closed	Method and System for Generic Multiprotocol Convergence Over Wireless Air Interface
05-019USA	7-Jul-06	11482495	Pending	Method and System for Generic Multiprotocol Convergence Over Wireless Air Interface
05-032USA	6-Jun-06	11447466	Issued #7,526,248 4/28/09	Extended Wireless Communication System and Method
05-035EPO	26-Apr-07	77613602	Pending	Modulation Dependent Automatic Gain Control
05-035TW	20-Apr-07	96114029	Pending	Modulation Dependent Automatic Gain Control
05-035USA	5-May-06	11381959	Pending	Modulation Dependent Automatic Gain Control
05-036USA	1-Sep-06	11469782	Issued #7,321,328 1/22/08	Single Bit DAC with Tristate Driver
05-041TW	28-Jun-07	96123602	Pending	Early Energy Measurement
05-041USA	29-Jun-06	11427651	Pending	Early Energy Measurement
05-045EPO	29-Jan-09	78097987	Pending	Packet Delineation Process
05-045TW	28-Jun-07	96123501	Pending	A System and Process for Packet Delineation
05-045USA	29-Jun-06	11479871	Pending	A System and Process for Packet Delineation
06-046PCT	13-Dec-07	PCTUS07087376	Pending	Shorthand Connection Identifier with Embedded Subfield
06-046USA	26-Dec-06	11616210	Pending	Shorthand Connection Identifier with Embedded Subfield
06-047EPO	7-Apr-09	78137783	Pending	Pre-Allocated Random Access Identifiers
06-047USA	1-Sep-06	11469794	Pending	Pre-allocated Random Access Identifiers
06-051PCT	14-Mar-08	PCTUS200805697 9	Pending	Methods and Apparatus for Identifying subscriber Station Mobility

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# **EXECUTION COPY**

FILE#	FILING DATE	SERIAL NUMBER	STAGE	TITLE
06-051USA	21-Mar-07	11689473	Pending	Methods and Apparatus for Identifying subscriber Station Mobility
06-056USA	23-Mar-07	11690706	Pending	System and Method for Personal Content Access
06-059USA	23-Mar-07	11690711	Pending	System and Method for Content Distribution
06-071USA	7-Mar-07	11683274	Pending	Channel Aggregation (old title:Channel Bonding)
06-085PCT	15-Jan-08	pctus0851064	Pending	Wireless Transceiver with Reduced Transmit Emissions (Hop and Squish)
06-085USA	19-Jan-07	11625254	Pending	Wireless Transceiver with Reduced Transmit Emissions (Hop and Squish)
06-086PCT	8-Jan-08	PCTUS200805050 0	Pending	Wireless Broadcasting System
06-086TW	9-Jan-08	97100783	Pending	Wireless Broadcasting System
06-086USA	12-Jan-07	11623032	Pending	Wireless Broadcasting System
06-101PCT	27-Jan-09	PCTUS0932165	Pending	Downlink Acquisition
06-101USA	28-Jan-08	12021167	Pending	Downlink Acquisition
06-108USA	6-Sep-07	11851362	Pending	Contention-Based Protocol
06-113PCT	15-Jan-08	PCTUS08051069	Pending	Transceiver with Receive and Transmit Path Performance Diversity (Golden Arches)
06-113USA	19-Jan-07	11625248	Pending	Transceiver with Receive and Transmit Path Performance Diversity (Golden Arches)
06-122PCT	16-Dec-08		Pending	Wireless System with Reduced Effect of IQ Imbalance
06-122USA	19-Dec-07	11960637	Pending	Wireless System with Reduced Effect of IQ Imbalance
06-125PCT	8-Jan-08	PCTUS200805107 3	Pending	Transmit Power Dependent Reduced Emissions From a Wireless Transceiver (Low Power Stretch)
06-125USA	19-Jan-07	11625260	Pending	Transmit Power Dependent Reduced Emissions From a Wireless Transceiver (Low Power Stretch)
06-139PCT	10-Jan-08	PCTUS0850719	Pending	Convergence Sublayer for Use in a Wireless Broadcasting System
06-139TW	9-Jan-08	97100784	Pending	Convergence Sublayer for Use in a Wireless Broadcasting System
06-139USA	12-Jan-07	11623034	Pending	Convergence Sublayer for Use in a Wireless Broadcasting System
06-140USA	16-Jan-08	12015431	Pending	System and Method for Power Reduction with Multiple Receive Paths
06-140PCT	15-Jan-09	PCT/US2009/0311 42	Pending	Power Reduction with Multiple Receive Paths

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# **EXECUTION COPY**

FILE#	FILING DATE	SERIAL NUMBER	STAGE	TITLE
0C 440DOT	10-Jan-08	PCTUS0850743	Donding	Multiple Network Access system
06-142PCT	10-Jan-06	PC1080850743	Pending	and Method
06-142TW	9-Jan-08	97100788	Pending	Multiple Network Access system and Method
06-142USA	26-Jan-07	11627897	Pending	Multiple Network Access system and Method
06-143USA	11-Apr-08	12101845	Pending	Efficient Determination of a Link Performance Parameter
06-146PCT	14-Mar-08	PCTUS200856987	Pending	Methods and Apparatus for Mobility Influenced Handoff
06-146USA	21-Mar-07	11689476	Pending	Methods and Apparatus for Mobility Influenced Handoff
06-151PCT	4-Jan-08	PCTUS08050302	Pending	Connection identifier for Wireless Broadcast System
06-151TW	8-Jan-08	97100680	Pending	Connection identifier for Wireless Broadcast System
06-151USA	12-Jan-07	11623024	Pending	Connection identifier for Wireless Broadcast System
06-152PCT	7-Jan-08	PCTUS0850365	Pending	Multidiversity Handoff in a Wireless Broadcast System
06-152TVV	9-Jan-08	97100793	Pending	Multidiversity Handoff in a Wireless Broadcast System
06-152USA	12-Jan-07	11623026	Pending	Multidiversity Handoff in a Wireless Broadcast System
06-153PCT	7-Jan-08	PCTUS0850369	Pending	Airlink Management in a Wireless Broadcast System
06-153TW	9-Jan-08	97100792	Pending	Airlink Management in a Wireless Broadcast System
06-153USA	12-Jan-07	11623027	Pending	Airlink Management in a Wireless Broadcast System
07-168PCT	21-Mar-08	PCTUS200857875	Pending	Method and Apparatus for Service Identification in a Wireless Communication System
07-168TW	24-Mar-08	97110341	Pending	Method and Apparatus for Service Identification in a Wireless Communication System
07-168USA	21-Dec-07	11963504	Pending	Method and Apparatus for Service Identification in a Wireless Communication System
07-171USA	8-Jul-08	12169537	Pending	Signal Transmission Parameter Control Using Channel Sounding
07-174USA	9-Apr-08	12100339	Pending	Reduction of Transmission Overhead in a Wireless Communication System
07-178USA	2-May-08	12114701	Pending	Transmit Emission Control in a Wireless Transceiver
07-179PCT	29-Feb-08	PCTUS200855456	Pending	Multi-band Channel Aggregation
07-179USA	7-Mar-07	11683314	Pending	Multi-band Channel Aggregation
07-183PCT	16-Apr-08	PCTUS200860517	Pending	Base Station Synchronization for a Single Frequency Network

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FILE#	FILING DATE	SERIAL NUMBER	STAGE	TIPLE :
07-183TW	18-Apr-08	97114091	Pending	Base Station Synchronization for a Single Frequency Network
07-183USA	16-Apr-08	12104299	Pending	Base Station Synchronization for a Single Frequency Network
07-184CA	3-Apr-08	2629205	Pending	System and Method for Facilitating Co-Channel & Co-Existence Via Enhanced Frame Preambles
07-184USA	31-Oct-07	11930695	Pending	System and Method for Facilitating Co-Channel and Co- Existence Via Enhanced Frame Preambles
07-188USA	11-Apr-08	12101852	Pending	Uplink Modulation and Coding Scheme Selection
07-194PCT	21-Mar-08	PCTUS200857883	Pending	Method and Apparatus for A Scheduler for a Macro-Diversity Portion of a Transmission
07-194TW	24-Mar-08	97110338	Pending	Method and Apparatus for A Scheduler for a Macro-Diversity Portion of a Transmission
07-194USA	1-Nov-07	11933987	Pending	Method and Apparatus for A Scheduler for a Macro-Diversity Portion of a Transmission
07-205PCT	4-Sep-08	PCTUS200807527 9	Pending	Persistent Resource Allocation (Sticky Allocation)
07-205US	5-Sep-08	12205436	Pending	Persistent Resource Allocation (Sticky Allocation)
07-206USA	27-Jun-08	12163586	Pending	Demapper Using Floating-Point Representation of Soft Bits
07-208PCT	17-Sep-08	PCT/US2008/0766 85	Pending	Time Multiplexing for Coexistence Within Multiple Communication Systems
07-208US	30-May-08	12130902	Pending	Time Multiplexing for Coexistence Within Multiple Communication Systems
07-217PCT	5-Nov-08	PCTUS0882444	Pending	Advanced Technology Frame Structure with Backward Compatibility
07-217USA	5-Nov-08	12265435	Pending	Advanced Technology Frame Structure with Backward Compatibility
07-222PCT	3-Dec-08	PCTUS200808543 6	Pending	Intercell Interference Mitigation
07-222US	3-Dec-08	12327732	Pending	Intercell Interference Management
07-226 PCT	4-Sep-08		Pending	Error Correction for a Persistent Resource Allocation
07-226US	4-Sep-08	12204719	Pending	Error Correction for a Persistent Resource Allocation
08-233PCT	16-Apr-08	PCTUS200860518	Pending	Base Station Synchronization for a Single Frequency Network

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FILE#	FILING DATE	SERIAL NUMBER	STAGE	TITLE
08-233TW	18-Apr-08	97114091	Pending	Base Station Synchronization for a Single Frequency Network
08-233USA	17-Apr-08	12104567	Pending	Macro-Diversity Region Rate Modification
08-234US	17-Mar-09	12405662	Pending	Transceiver w/ Receive Path Performance Diversity and Combiner w/ Detect Feedback
08-235PCT	9-Mar-09	PCTUS200903655 6	Pending	Efficient & Consistent Wireless Downlink Channel Configuration
08-235US	9-Mar-09	12400618	Pending	Efficient and Consistent Wireless Downlink Channel
08-239PCT	8-Dec-08	PCTUS0885974	Pending	Outer Coding Framework for Application Packet Error Rate Minimization
08-239USA	2-Jul-08	12167186	Pending	Outer Coding Framework for Application Packet Error Rate Minimization
08-241PRV	27-Jun-08	61076360	Pending	Method and Apparatus for Using Physical Layer Error Control to Direct Media Access Layer Error Control
08-241PRV B	9-Sep-08	61095580	Pending	Method and Apparatus for Using Physical Layer Error Control to Direct Media Access Layer Error Control
08-252PCT	8-Dec-08	PCTUS0885979	Pending	Network Entry and Recovery
08-252USA	29-Aug-08	12202182	Pending	Network Entry and Recovery
08-254PCT	8-Dec-08	PCTUS0885982	Pending	Data Fragmentation Identification in a Data Table (aka Convergence Sub-Layer)
08-254US	29-Aug-08	12202184	Pending	Data Fragmentation Identification in a Data Table (aka Convergence Sub-Layer)
08-255PCT	8-Dec-08	PCTUS0885984	Pending	Compact Specification of Data Allocations (aka MBS Numbering System)
08-255US	29-Aug-08	12202187	Pending	Compact Specification of Data Allocations (aka MBS Numbering System)
08-258US	3-Mar-09	12397300	Pending	CL-MIMO Harmonized Feedback
08-259PCT	9-Dec-08	PCTUS0886103	Pending	Outer Coding Framework
08-259US	29-Aug-08	12202170	Pending	Outer Coding Framework
08-260PCT	10-Dec-08	PCTUS0886272	Pending	Packet Error Correlation Minimization
08-260US	29-Aug-08	12202180	Pending	Packet Error Correlation Minimization
08-261PCT	10-Dec-08	PCTUS0886278	Pending	Modulation Symbol to Outer Codeword Mapping
08-261US	29-Aug-08	12202174	Pending	Modulation Symbol to Outer Codeword Mapping
08-262PRV	3-Jul-08	61078273	Pending	Fractional HARQ Re-

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# **EXECUTION COPY**

FILE#	FILING DATE	SERIAL NUMBER	STAGE	TITLE
				transmission
08-263PRV	7-Jul-08	61078766	Pending	Closed Form Singular Value Decomposition
08-264PRV	7-Jul-08	61078765	Pending	Improved Precoder for Mulitple- subcarrier Band Feedback
08-265PRV	7-Jul-08	61078767	Pending	Multiple Input Multiple Output (MIMO) Rank Adaptation with Uniform Channel Decomposition
08-274PRV	28-Aug-08	61092716	Pending	Hybrid Feedback for Closed Loop MIMO
08-275PRV	3-Sep-08	61094027	Pending	MBS with Outer Coding and Adjusted Frame Reference
08-277PRV	31-Oct-08	61110455	Pending	Multicast Broadcast Service (MBS) Controller
NEXTWV.001A	1-Sep-99	9388236	Issued #6,941,338B1 9/6/05	Distributed Cache for a Wireless Communication System
NEXTWV.001VAU	1-Sep-00	7107500	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VDE	1-Sep-00	9598152	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VFI	1-Sep-00	9598152	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VFR	1-Sep-00	9598152	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VGB	1-Sep-00	9598152	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VIL	1-Sep-00	148231	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VIN	1-Sep-00	200200203DEL	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VKR	1-Sep-00	1020027002615	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VSE	1-Sep-00	9598152	Issued	Distributed Cache for a Wireless Communication System
NEXTWV.001VCA	1-Sep-00	2384040	Issued	Distributed Cache for a Wireless Communication System

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